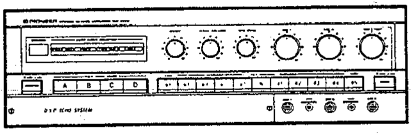
PIONEER®
The Art of Entertainment

Service Manual



ORDER NO.
ARP2342

STEREO MIXING AMPLIFIER
SA-V240

SA-V240 HAS FOLLOWING VERSIONS:

Type	Power Requirement	Remarks
KUC	AC 120V only	
SEZ	AC110-115V, 120-127V, 220-230V, 240V (switchable)	

- **This manual is applicable to KUC and SEZ types.**
- **As to SEZ type, refer to page 94.**
- **Ce manuel pour le service comprend les explications de réglage en francais.**
- **Este manual de servicio trata del método ajuste escrito en español.**

CONTENTS

1. SAFETY INFORMATION 2
2. EXPLODED VIEWS, PACKING AND PARTS LIST 4
3. SCHEMATIC AND P. C. BOARDS CONNECTION DIAGRAM 8
4. BLOCK DIAGRAM 73
5. P. C. B's PARTS LIST 75
6. ADJUSTMENTS 80
   REGLAGES 81
   AJUSTES 82
7. IC INFORMATION 83
8. FOR SEZ TYPE 94
9. SPECIFICATIONS 97
10. PANEL FACILITIES 98

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This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY INFORMATION

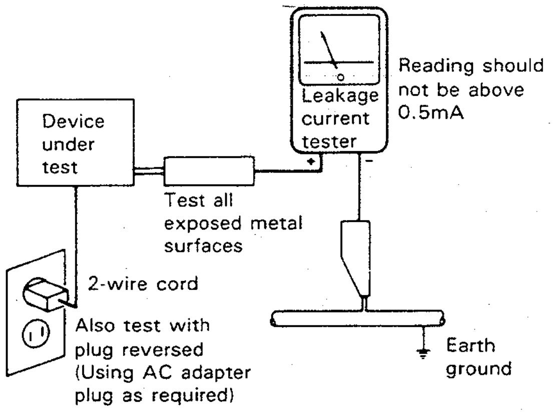
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Device under test
Leakage current tester
Reading should not be above 0.5mA
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

WARNING!

Lithium batteries. Danger of explosion. Replacement must be done by qualified personnel and only by following the instructions given in the service manual.

This warning is stated on the product or in the operating instructions. When replacing the lithium batteries, follow the note below.
Dispose of the used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire.
The battery used in this device may present a fire or chemical hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate. Replace only with the same Part Number. Use of another battery may present a risk of fire or explosion.

Note: The lithium battery installation position is shown in the exploded view and the P.C. board pattern.

ADVARSEL!

Lithiumbatteri — Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

Denne advarsel or angivet på produktet eller i brugsvejledningen. Ved udskiftning af lithium batterierne følges nedenstående anveisning.
Batterierne må kun udskiftes med batterier af samme type og mærke.

VARNING

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

Denna varning finns på apparaten eller i bruksanvisningen. Följ nedanstående anvisningar vid byte av litiumbatterier.
Batterierna får endast bytas ut mot litiumbatterier av samma typ och fabrikat.

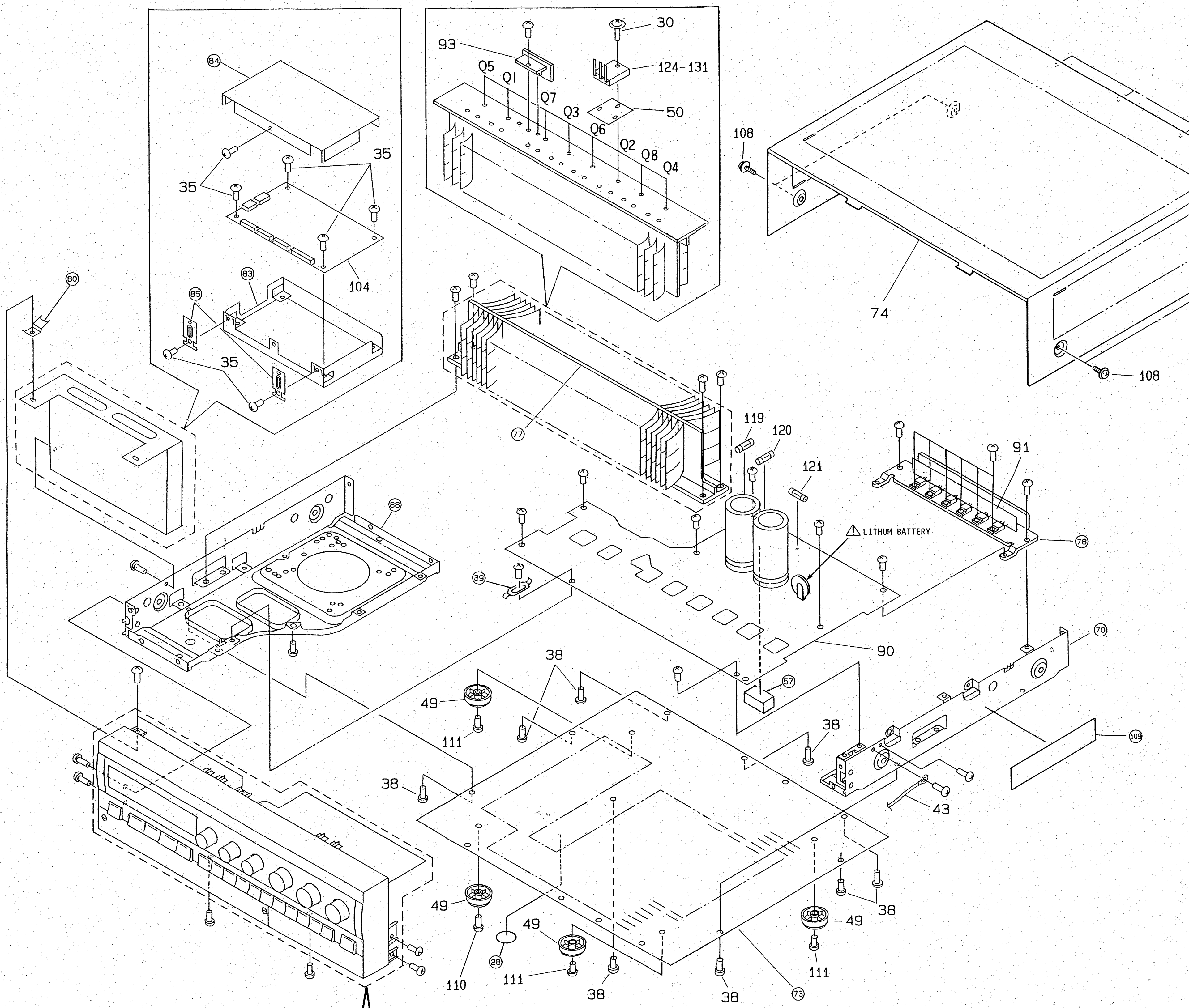
2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES:

- *The parts with an encircled number are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

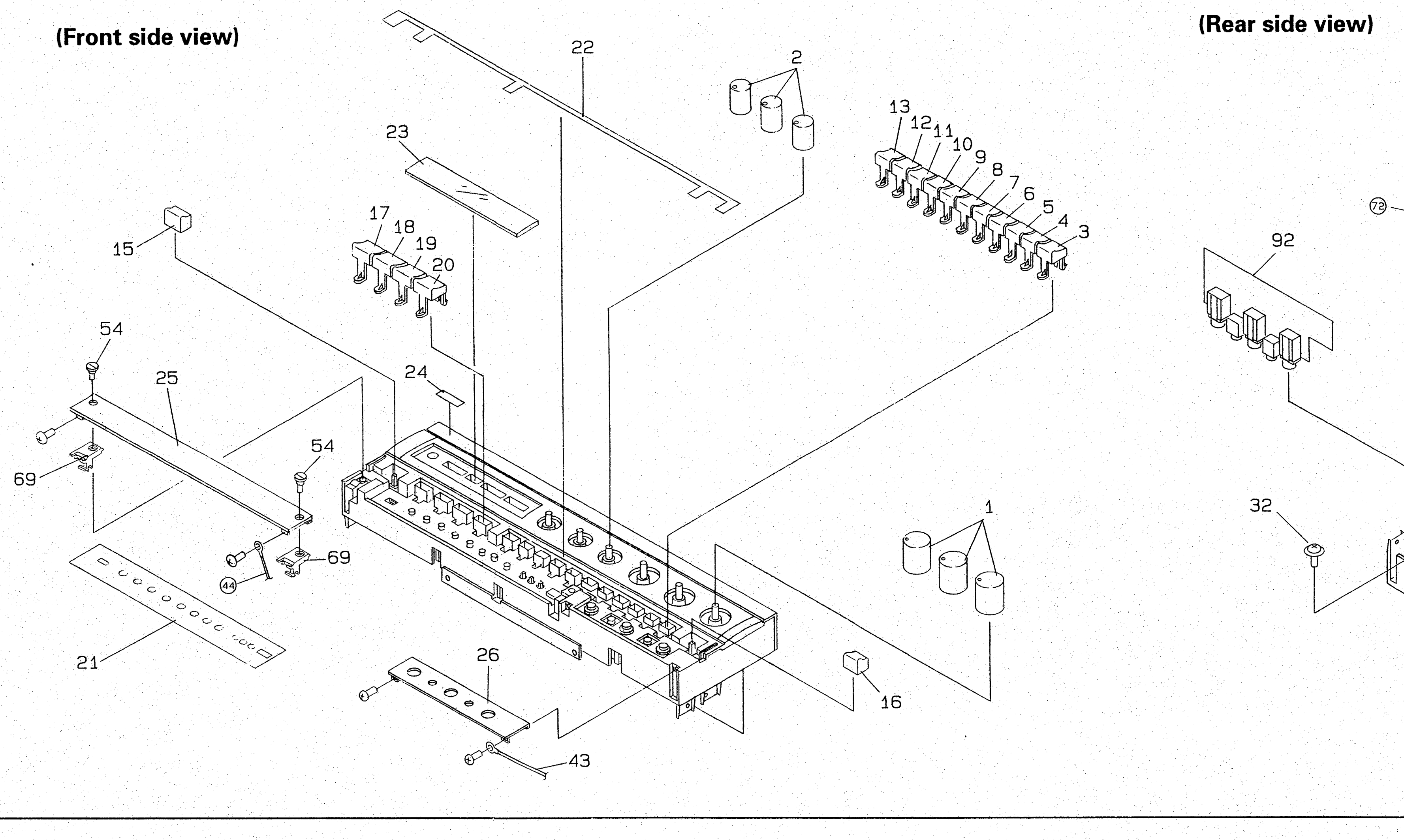
Mark	No.	Description	Part No.
	1	VOLUME KNOB Ass'y (MIC1,2,3 VOLUME control)	AAB1233
	2	VOLUME KNOB Ass'y (MUSIC/MAIN/MIC ECHO)	AAB1234
	3	KEY CON KNOB (♯5)	AAD2016
	4	KEY CON KNOB (♯4)	AAD2017
	5	KEY CON KNOB (♯3)	AAD2018
	6	KEY CON KNOB (♯2)	AAD2019
	7	KEY CON KNOB (♯1)	AAD2020
	8	KEY CON KNOB (♮)	AAD2021
	9	KEY CON KNOB (♭1)	AAD2022
	10	KEY CON KNOB (♭2)	AAD2023
	11	KEY CON KNOB (♭3)	AAD2024
	12	KEY CON KNOB (♭4)	AAD2025
	13	KEY CON KNOB (♭5)	AAD2026
	14	MECHA SWITCH KNOB (HOWLING CUT/TAPE REC/SET MEMO)	AAD2029
	15	PUSH KNOB (POWER)	AAD2034
	16	PUSH KNOB (ECHO)	AAD2035
	17	DSP ECHO MODE KNOB (A)	AAD2036
	18	DSP ECHO MODE KNOB (B)	AAD2037
	19	DSP ECHO MODE KNOB (C)	AAD2038
	20	DSP ECHO MODE KNOB (D)	AAD2039
	21	SHIELING PANEL	AAK2177
	22	ALUMINIUM SHEET	AAK2178
	23	PVC PANEL (PLS)	AAK2179
	24	NAME PLATE (METAL)	AAM1029
	25	DOOR PANNEL	AAN1284
	26	AL PANNEL	AAN1286
	27	FUSE CARD	AAX−147
	28	UL CAUTION CARD	AAX−313
	29	....	
	30	SCREW (STEEL)	ABA−297
	31	SCREW	ABA−298
	32	SCREW WITH WASHER	ABA1005
	33	SCREW (STEEL)	ABA1006
	34	SCREW	ABA1008
	35	SCREW (STEEL)	ABA1009
	36	SCREW	ABA1015
	37	SCREW (STEEL)	ABA1047
	38	SCREW (STEEL)	ABA1048
	39	GROUND SPRING	ABK1002
	40	NUT	ABN−065
	41	PULG CORD	ADE−044
⚠	42	AC POWER CORD	ADG1058
	43	GROUND LEAD	ADX1179
	44	GROUND LEAD	ADX1519
	45	GROUND LEAD	ADX1565
	46	NYLON BINDER	AEC−093
	47	COVER	AEC−294
	48	RIVET	AEC−441
	49	CABINET BUMPER	AEC−613
	50	MICA SHEET	AEC−818
	51	PCB SUPPORT	AEC1013
	52	PCB SPACER	AEC1104
	53	PCB SPACER	AEC1361
	54	RIVET	AEC1362
	55	HOLDER	AEC1363
	56	CORD STOPPER	AEP−113
	57	CUSHION	AEP−175
	58	DRY CELL (AAA, R03)	AEX−021
	59	SIDE PAD L	AHA1436
	60	SIDE PAD R	AHA1437
	61	PACKING CASE	AHD2135
	62	COVER	ANK1187
	63	LITERATURE BAG	AHG−117
	64	SHEET	AHG−186
	65	TERMINAL SCREW	AKE−031
	66	PLUG	AKM1061
⚠	67	AC SOCKET 3−P	AKP−515
	68	FRONT PANEL (PLS)	AMB1850
	69	DOOR HINGE (PLS)	AMR2303
	70	RIGHT FRAME	ANA1143
	71	REAR PANEL	ANC1741
	72	VOLUME FIX PLATE (MTL)	AND1049
	73	BOTTOM PLATE	ANE−531
	74	BONNET	ANE1238
	75	PCB SUPPORTER PLATE	ANG1482
	76	SWITCH SUPPORTER	ANG1596
	77	HEAT SINK	ANH−875
	78	SUB HEAT SINK	ANH1339
	79	GROUND PLATE	ANK1074
	80	....	
	81	GROUND PLATE	ANK1155
	82	GROUND PLATE	ANK1156
	83	SHIELD CASE	ANK1171
	84	SHIELD	ANK1172
	85	SHIELD	ANK1173
	86	SHIELD PLATE	ANK1175
	87	SHIELD PLATE	ANK1176
	88	TRANS. FRAME	ANS−254
	89	OPERATING INSTRUCTIONS (ENGLISH)	ARE1209
	90	POWER Ass'y	AWZ3449
	91	REG Ass'y	AWZ3450
	92	MIC Ass'y	AWZ3452
	93	BIAS Ass'y	AWZ3453
	94	FRONT Ass'y	AWZ3454
	95	EXPAND Ass'y	AWZ3455
	96	VOL Ass'y	AWZ3457
	97	VIDEO Ass'y	AWZ3458
	98	SP Ass'y	AWZ3460
	99	TONE Ass'y	AWZ3558
	100	SELECT Ass'y	AWZ3461
	101	REAR Ass'y	AWZ3462
	102	FUSE Ass'y	AWZ3463
	103	REMOTE CONTROL UNIT	AXD1222
	104	DSP Ass'y	AXY1017
	105	BATTERY LID	AZN2093
	106	PCB HOLDER A	BNG1028
	107	SCREW	BPZ30P080FMC
	108	SCREW	FBT40P080FZK
	109	65 LABEL	ORW1069
	110	SCREW	VBZ40P060FMC
	111	SCREW	VBZ40P080FMC
	112	SCREW	VMZ30P060FCU
⚠	113	C1 CKA (0.01/AC400V)	ACG1003
⚠	114	C2 CKA (0.01/AC400V)	ACG1003
⚠	115	D LED	AEL1138
⚠	116	D LED	AEL1139
⚠	117	D LED	AEL1141
⚠	118	FU2 FUSE (8A)	AEK1002
⚠	119	FU3 FUSE (1.25A)	AEK−120
⚠	120	FU4 FUSE (1.25A)	AEK−120
⚠	121	FU5 FUSE (2.5A)	AEK−123
⚠	122	J12 11P HOUSING WIRE	ADX1586
⚠	123	L FERRITE CORE	ATX1017
⚠	124	Q1 TRANSISTOR	2SC3907P
⚠	125	Q2 TRANSISTOR	2SC3907P
⚠	126	Q3 TRANSISTOR	2SA1516P
⚠	127	Q4 TRANSISTOR	2SA1516P
⚠	128	Q5 TRANSISTOR	2SC3907P
⚠	129	Q6 TRANSISTOR	2SC3907P
⚠	130	Q7 TRANSISTOR	2SA1516P
⚠	131	Q8 TRANSISTOR	2SA1516P
⚠	132	S1 POWER SWITCH	ASG1044
⚠	133	T1 POWER TRANSFORMER	ATS1365

MAIN BODY SECTION 1/2 (Front side view)


93
30
124-131
Q5
Q1
Q7
Q3
Q6
50
Q2
Q8
Q4
(84)
35
35
35
104
(83)
(85)
35
(80)
108
74
108
(77)
119
120
121
91
LITHUM BATTERY
(78)
(88)
㊴
90
(70)
38
(57)
49
111
38
38
(109)
43
49
38
49
49
110
㉘
111
38
38
111
(73)

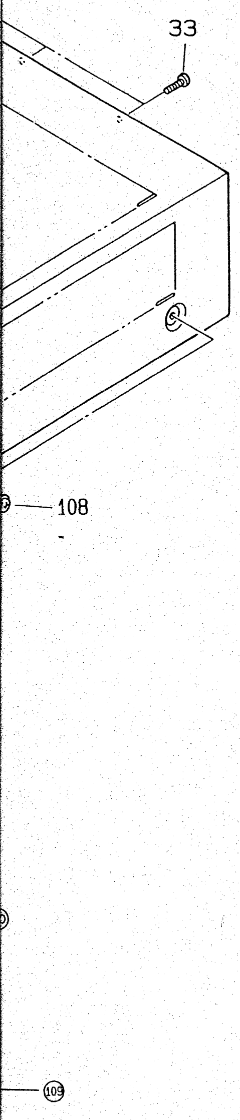
NOTE:
Screws that are not numbere
are all No. 31 Bind B Tight (Al

FRONT PANEL SECTION

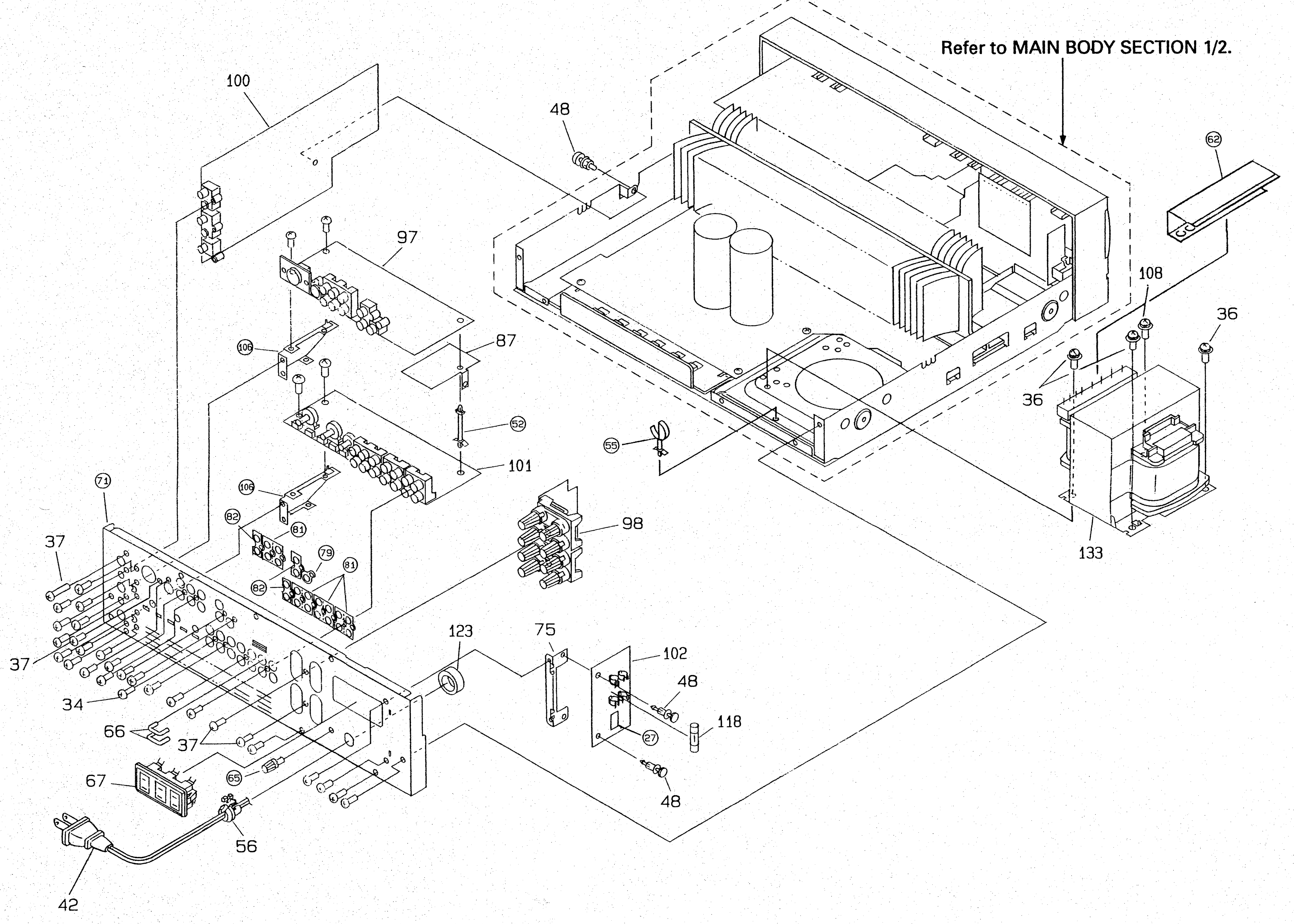

22
2
13
12
11
10
9
8
7
6
5
4
3
23
17
18
19
20
15
(72)
92
54
25
24
69
54
69
㊹
1
32
21
26
16
43

(Front side view)

(Rear side view)

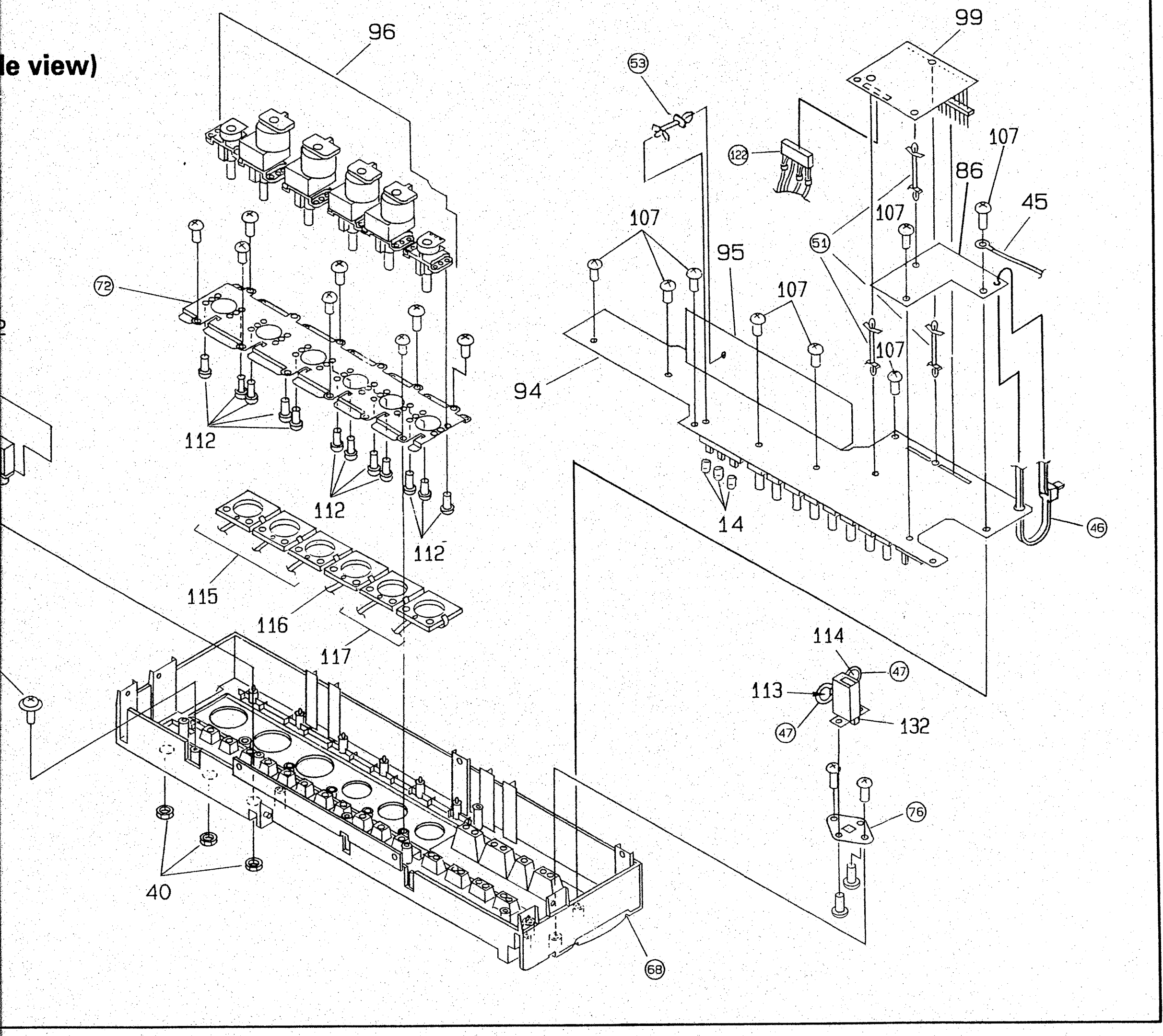


MAIN BODY SECTION 2/2 (Rear side view)

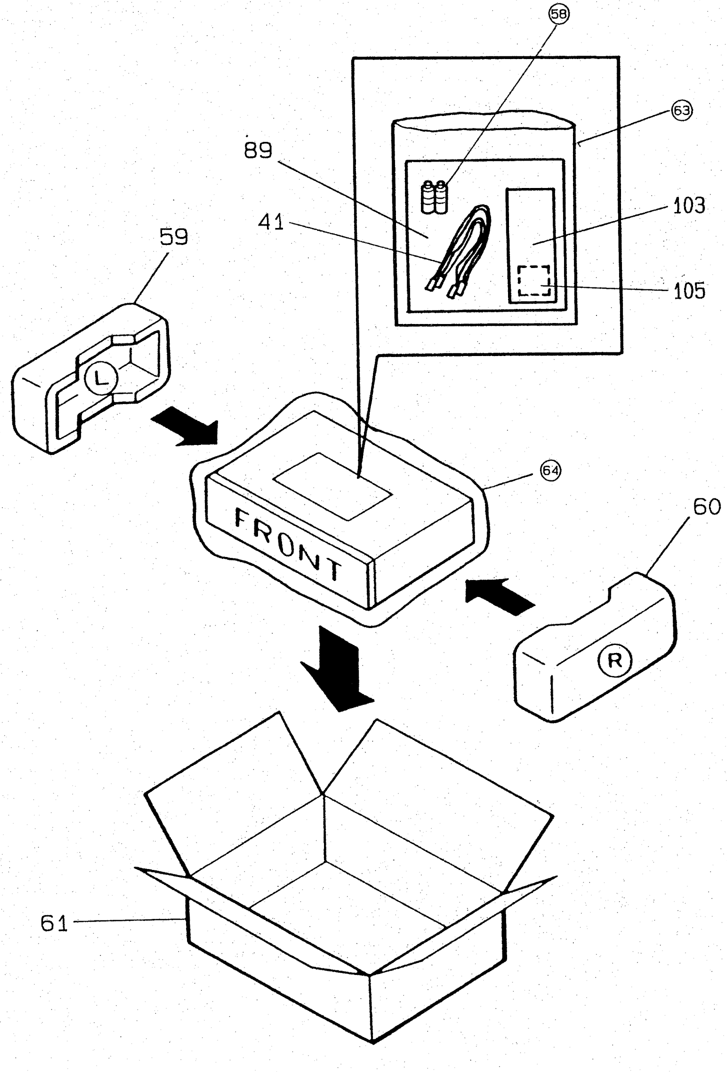

Refer to MAIN BODY SECTION 1/2.
100
48
(62)
97
(106)
87
(52)
101
108
36
36
(55)
(71)
(106)
(82)
(81)
(79)
(81)
(82)
98
133
37
37
34
66
37
123
75
102
48
118
㉗
48
67
(65)
56
42

not numbered
d B Tight (ABA-298).

le view)

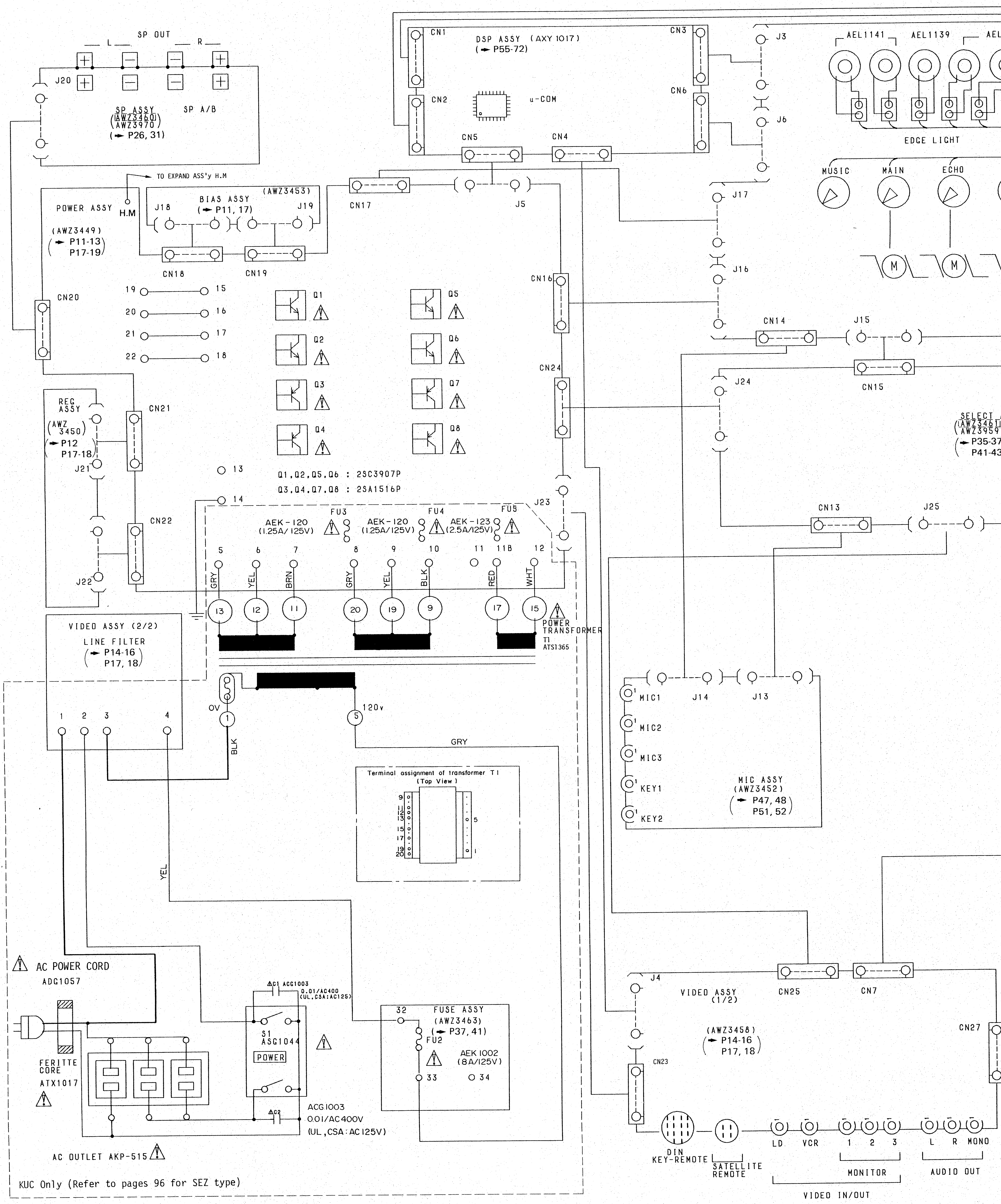

96
(53)
99
(72)
(122)
107
107
86
45
107
95
(51)
107
107
107
94
112
112
112
14
(46)
115
116
117
114
(47)
113
(47)
132
(76)
40
(68)

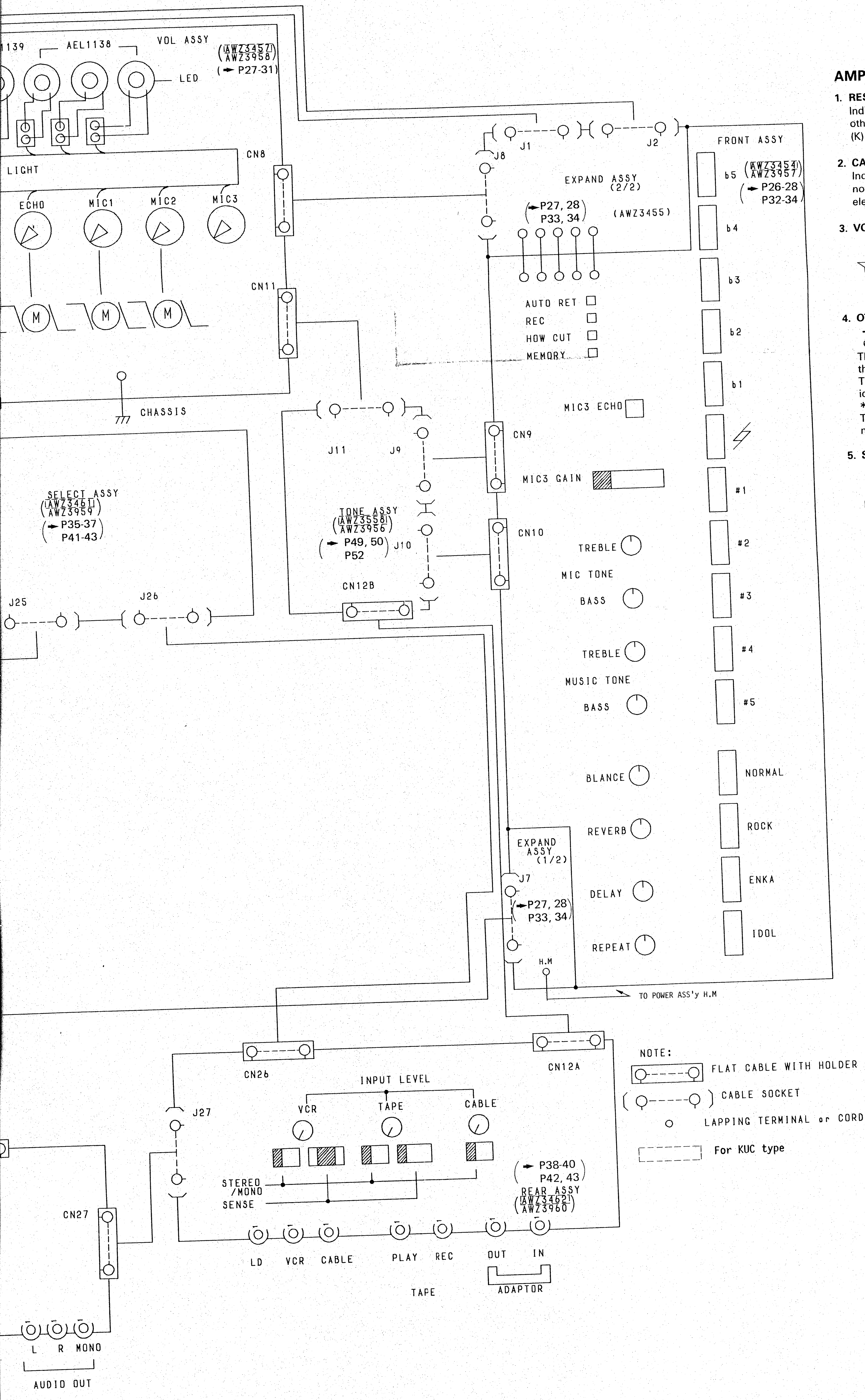
PACKING


(58)
(63)
89
103
41
105
59
L
FRONT
(64)
60
R
61

3. SCHEMATIC AND P.C. BOARDS CONNECTION DIAGRAM

3.1 OVERALL WIRING DIAGRAM


SP OUT
L
R
J20
SP ASSY
(AWZ3460)
(AWZ3970)
(→ P26, 31)
SP A/B
TO EXPAND ASS'y H.M
POWER ASSY
H.M
(AWZ3449)
(→ P11-13
P17-19)
BIAS ASSY
(AWZ3453)
(→ P11, 17)
J18
J19
CN18
CN19
CN20
19 20 21 22
15 16 17 18
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8
Q1,Q2,Q5,Q6 : 2SC3907P
Q3,Q4,Q7,Q8 : 2SA1516P
13
14
REG ASSY
(AWZ 3450)
(→ P12
P17-18)
J21
J22
CN21
CN22
DSP ASSY (AXY 1017)
(→ P55-72)
CN1
CN2
CN3
CN6
CN5
CN4
u-COM
CN17
J5
CN16
CN24
J23
FU3
AEK-120
(1.25A/125V)
FU4
AEK-120
(1.25A/125V)
FU5
AEK-123
(2.5A/125V)
5 6 7 8 9 10 11 11B 12
GRY YEL BRN GRY YEL BLK RED WHT
13 12 11 20 19 9 17 15
POWER TRANSFORMER
T1
ATS1365
VIDEO ASSY (2/2)
LINE FILTER
(→ P14-16
P17, 18)
1 2 3 4
OV
1
BLK
5
120V
GRY
YEL
Terminal assignment of transformer T1
(Top View)
9 11 12 13 15 17 19 20
5
1
AC POWER CORD
ADG1057
FERITTE CORE
ATX1017
C1 ACG1003
0.01/AC400
(UL,CSA:AC125)
S1
ASG1044
POWER
C2
ACG1003
0.01/AC400V
(UL,CSA:AC125V)
AC OUTLET AKP-515
FUSE ASSY
(AWZ3463)
(→ P37, 41)
32
FU2
AEK1002
(8A/125V)
33
34
KUC Only (Refer to pages 96 for SEZ type)
J3
J6
AEL1141
AEL1139
AEL
EDGE LIGHT
MUSIC
MAIN
ECHO
M
M
J17
J16
CN14
J15
CN15
J24
SELECT
(AWZ3461)
(AWZ3959)
(→ P35-37
P41-43
CN13
J25
MIC1
MIC2
MIC3
KEY1
KEY2
J14
J13
MIC ASSY
(AWZ3452)
(→ P47, 48
P51, 52)
J4
VIDEO ASSY
(1/2)
(AWZ3458)
(→ P14-16
P17, 18)
CN25
CN7
CN27
CN23
DIN
KEY-REMOTE
SATELLITE
REMOTE
LD
VCR
1 2 3
MONITOR
L R MONO
AUDIO OUT
VIDEO IN/OUT


1139
AEL1138
VOL ASSY
(AWZ3457 / AWZ3958)
(→ P27-31)
LED
LIGHT
CN8
ECHO
MIC1
MIC2
MIC3
CN11
M
CHASSIS
J1
J2
J8
FRONT ASSY
EXPAND ASSY (2/2)
(→P27, 28 P33, 34)
(AWZ3455)
♭5
(AWZ3454 / AWZ3957)
(→ P26-28 P32-34)
♭4
♭3
♭2
♭1
AUTO RET
REC
HOW CUT
MEMORY
MIC3 ECHO
CN9
MIC3 GAIN
♮
#1
#2
#3
#4
#5
J11
J9
SELECT ASSY
(AWZ3461 / AWZ3959)
(→ P35-37 P41-43)
TONE ASSY
(AWZ3558 / AWZ3956)
(→ P49, 50 P52)
J10
CN10
TREBLE
MIC TONE
BASS
CN12B
J25
J26
TREBLE
MUSIC TONE
BASS
BLANCE
NORMAL
REVERB
ROCK
EXPAND ASSY (1/2)
J7
(→P27, 28 P33, 34)
DELAY
ENKA
REPEAT
IDOL
H.M
TO POWER ASS'y H.M
CN26
CN12A
INPUT LEVEL
J27
VCR
TAPE
CABLE
STEREO /MONO SENSE
(→ P38-40 P42, 43)
REAR ASSY
(AWZ3462 / AWZ3960)
CN27
LD
VCR
CABLE
PLAY
REC
OUT
IN
TAPE
ADAPTOR
L
R
MONO
AUDIO OUT
NOTE:
FLAT CABLE WITH HOLDER
CABLE SOCKET
LAPPING TERMINAL or CORD
For KUC type

AMP MODEL

1. **RESISTORS:**
   Indicated in Ω, 1/8, 1/6 and 1/4W, ±5% toleance unless otherwise noted k; kΩ, M; MΩ, (F); ±1%, (G); ±2%, (K); ±10%, (M); ±20% tolerance.

2. **CAPACITORS:**
   Indicated in capacity (μF)/ voltage (V) unless otherwies noted p;pF. Indication without voltage is 50V except electrolytic capacitor.

3. **VOLTAGE, CURRENT:**
   V; Signal voltage at (100W + 100W/8Ω) signal voltage and output.
   ; DC valtage (V) at no input signal.
   Value in ( ) is DC voltage at rated power.
   mA ; DC current at no input signal.

4. **OTHERS:**
   → ; Signal route.
   ⊘ ; Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safty factor of the part.
   Therefore, when replacing, be sure to use parts of identical designation.
   ∗ marked capacitors and resistors have parts numbers.
   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. **SWITCHES:** (The underline indicates the switch position.)

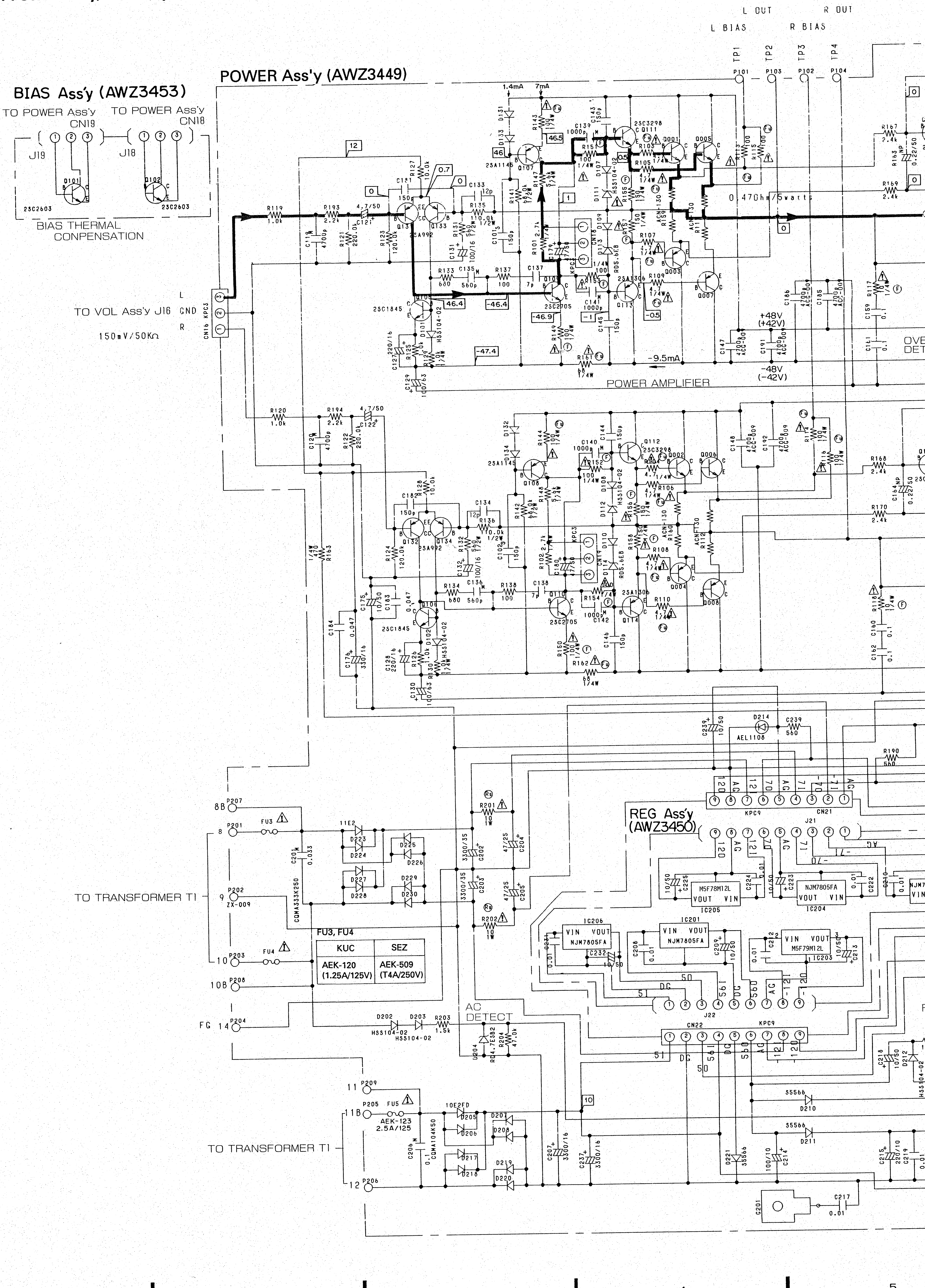
S1:POWER ON-OFF

REAR Ass'y
S601:SLIDE SW (VCR MODE) STEREO—MONO
S602:SLIDE SW (TAPE/AUX MODE) STEREO—MONO
S603:SLIDE SW (CABLE MODE) STEREO—MONO
S604, S605:SLIDE SW (VCR SOURCE SELECT SENS.) L—M—H

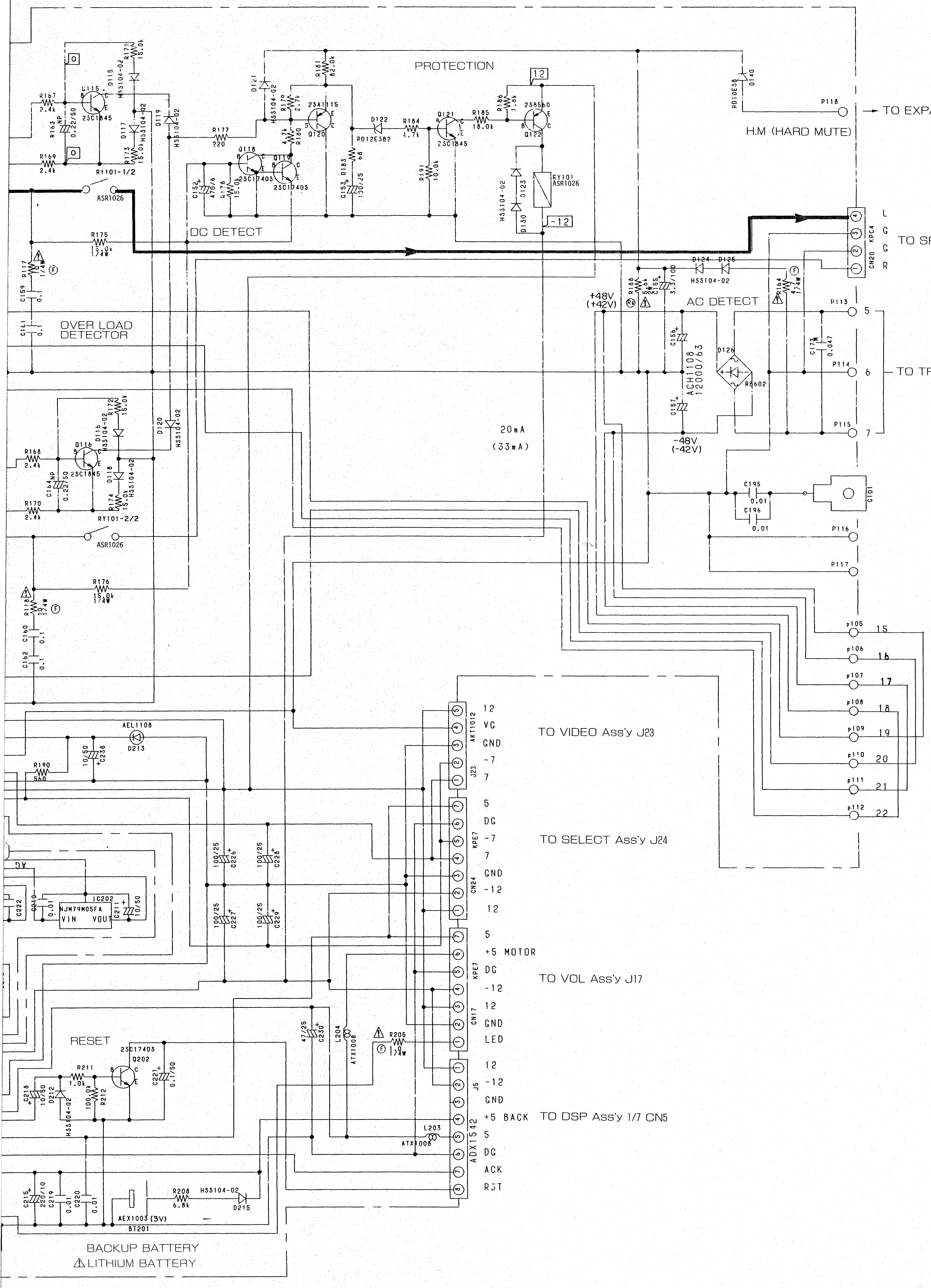
FRONT Ass'y
S801:TACT SW (A) (KEY CONTROL)
S802: (♭5)
S803: (♭1)
S804: (#3)
S805: (B)
S806: (♭4)
S807: (♮)
S808: (#4)
S809: (C)
S810: (♭3)
S811: (#1)
S812: (#5)
S813: (D)
S814: (♭2)
S815: (#2)
S816: (MEMORY)
S817:PUSH SW (HOWLING CUT/TAPE REC/SET MEMO) ON—OFF
S820:SLIDE SW(MIC3 GAIN) LINE—GUITAR—MIC
S822:PUSH SW(MIC3 ECHO) ON—OFF

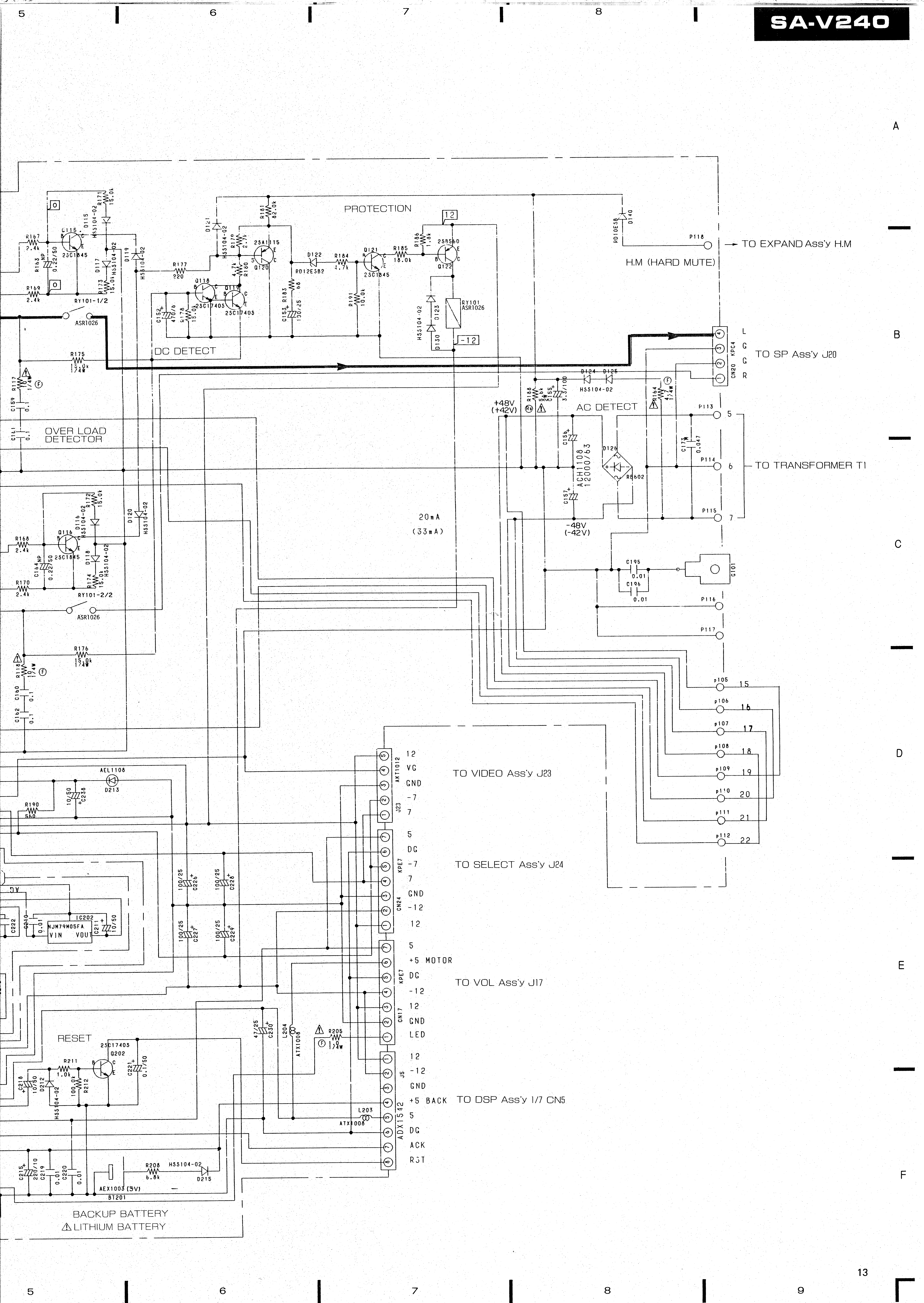
3.2 POWER ASS'Y, REG ASS'Y. BIAS ASS'Y AND VIDEO ASS'Y

3.2.1 POWER Ass'y, REG Ass'y and BIAS Ass'y SCHEMATIC DIAGRAM


A
B
C
D
E
F
L OUT
R OUT
L BIAS
R BIAS
TP1
TP2
TP3
TP4
P101
P103
P102
P104
BIAS Ass'y (AWZ3453)
TO POWER Ass'y CN19
TO POWER Ass'y CN18
J19
J18
Q101
Q102
2SC2603
BIAS THERMAL CONPENSATION
POWER Ass'y (AWZ3449)
1.4mA
7mA
D131
D133
R143
C143
C139 1000p
2SC3298 Q111
Q001
Q005
R113
R115
R103
R105
R151
R147
D107
D111
HSS104-02
Q107
2SA1145
R119 1.0k
R193 2.2k
C121 4.7/50
C181
R127 10.0k
Q131
Q133
2SA992
C133 12p
R135 110.0k 1/2W
R141
R131
C131 100/16
C101
R101 2.7k
C179 47/50
KPC3
CN18
D109
RD5.6EB
R157
R155
R159
R107
ACN-130
R111
Q003
Q007
0.47Ohm/5watts
R167 2.4k
R163
R169 2.4k
C119 4700p
R121 220.0k
R123 120.0k
R133 680
C135 560p
R137 100
C137 7p
Q109
2SC2705
R109 4.7 1/4W
C141 1000p
Q113
2SA1306
R153
2SC1845
Q105
D101
HSS104-02
46.4
-46.4
-46.9
-47.4
-1
-0.5
C186
C185
C147
C191
C159
C161
R117
+48V (+42V)
-48V (-42V)
-9.5mA
R149
R161 68 1/4W
C145 150p
C127 220/16
R125
R129
C129 100/63
POWER AMPLIFIER
OVE DET
TO VOL Ass'y J16
L
GND
R
CN16 KPC3
150mV/50kΩ
R120 1.0k
R194 2.2k
C122 4.7/50
C120 4700p
R122 220.0k
D132
D134
R144
C144
C140 1000p
Q112 2SC3298
Q002
Q006
C148
C192
R114
R116
R168 2.4k
C164
R170 2.4k
R152
Q108
2SA1145
R148
D108
D112
R142
R128 10.0k
C182 150p
Q132
Q134
C134 12p
R136 110.0k 1/2W
C132 100/16
C102
R102 2.7k
C180 47/50
CN19
D110
D114
RD5.6EB
R156
R158
R108
R106
ACN-130
R112
Q004
Q008
R124 120.0k
R132
R163 470 1/4W
C175 10/50
C183 0.047
R134 680
C136 560p
R138 100
C138 7p
Q110 2SC2705
R154
C142 1000p
Q114 2SA1306
R110 4.7 1/4W
R118
C160
C162
C184 0.047
C176 330/16
Q106
2SC1845
D102
HSS104-02
C128 220/16
R126
R130
C130 100/63
R150
R162 68 1/4W
C146 150p
D214
AEL1108
C239 10/50
C239 560
R190 560
12D AC 12I 7D AC 7I -7D -7I AC
KPC9
CN21
J21
REG Ass'y (AWZ3450)
8B P207
8 P201
FU3
11E2
D223
D224
D225
D226
D227
D228
D229
D230
C201 0.033
CQMA333K250
R201 10 1W
C202 3300/35
C204 47/25
C203 3300/35
C205 47/25
R202 10 1W
TO TRANSFORMER T1
9 P202 ZX-009
10 P203
FU4
10B P208
FU3, FU4
M5F78M12L
VOUT VIN
IC205
C225 10/50
C224 0.01
C223 10/50
NJM7805FA
IC204
C222 0.01
C220 0.01
IC206
VIN VOUT
NJM7805FA
C231 0.01
C232 10/50
C208 0.01
IC201
C209 10/50
C212 0.01
M5F79M12L
IC203
C213 10/50
50
51
DG
5G1
5G0
12I
-12I
J22
CN22
KPC9
FG 14 P204
D202
D203
HSS104-02
R203 1.5k
AC DETECT
D204 RD4.7ESB2
R204 47.0k
11 P209
11B P205
FU5
AEK-123 2.5A/125
10E2FD
D205
D206
D207
D208
D217
D218
D219
D220
C206 0.1
CQMA104K50
TO TRANSFORMER T1
12 P206
C207 3300/16
C237 3300/16
10
D221 SS566
C214 100/10
SS566
D210
D211
C218 10/50
D212
HSS104-02
C215 220/10
C219 0.01
C201
C217 0.01

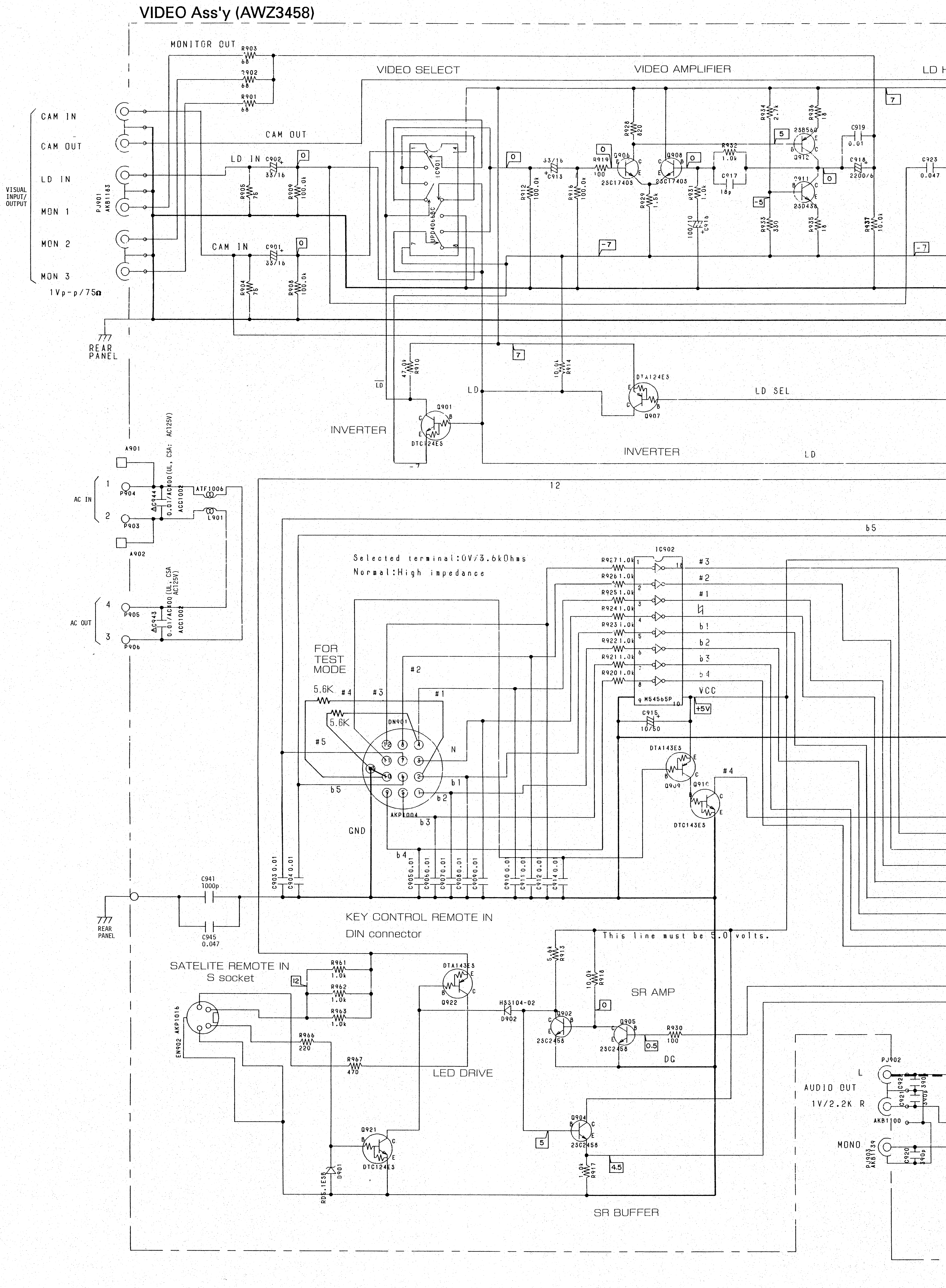
KUC	SEZ
AEK-120 (1.25A/125V)	AEK-509 (T4A/250V)

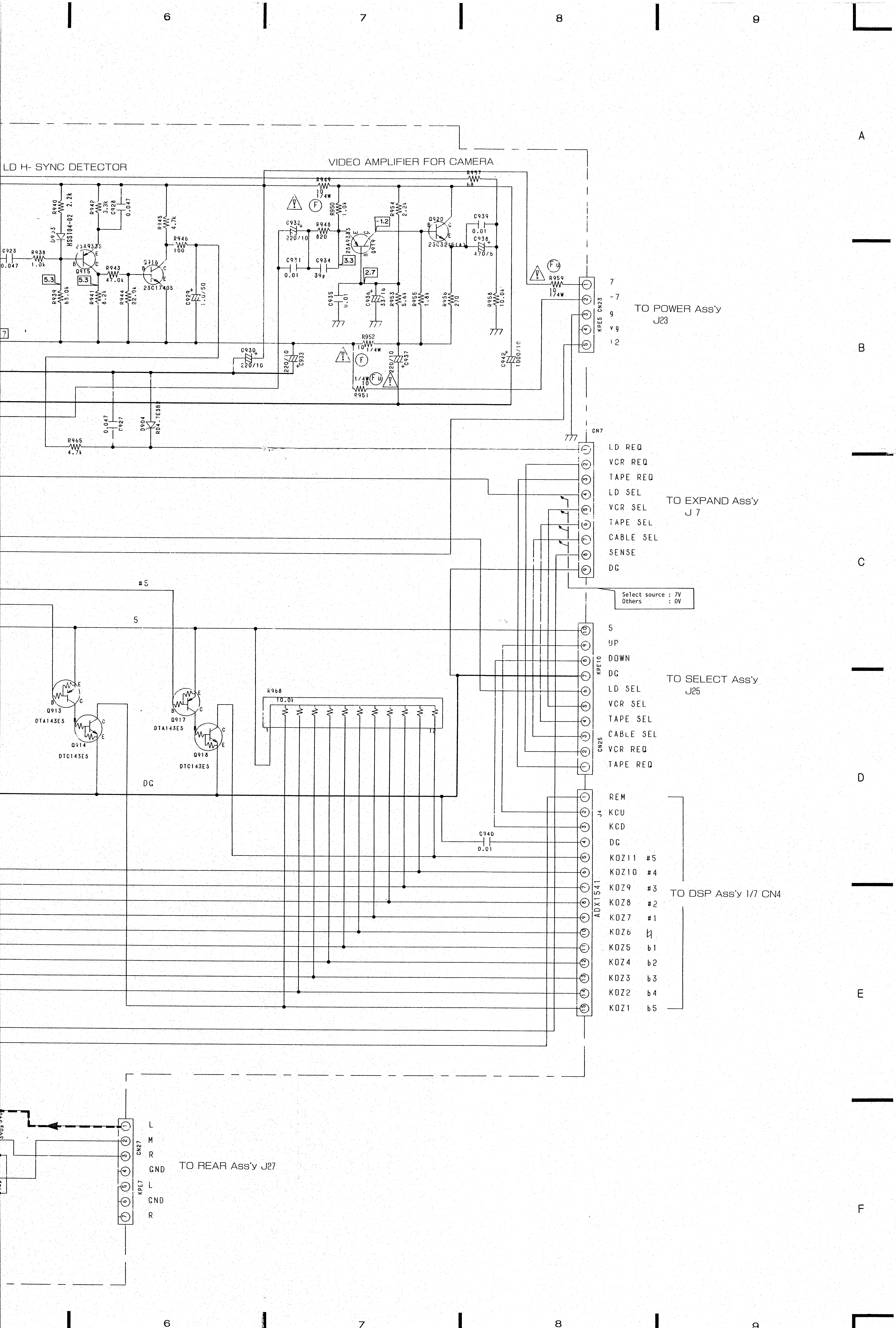

PROTECTION
DC DETECT
OVER LOAD DETECTOR
AC DETECT
H.M (HARD MUTE)
TO EXPAND Ass'y H.M
P118
D140
RD10ES8
TO SP Ass'y J20
KPC4
CN20
L
G
G
R
TO TRANSFORMER T1
P113
P114
P115
5
6
7
+48V
(+42V)
-48V
(-42V)
ACH1108
12000/63
C156
C157
D126
RB602
C173
0.047
R164
4.7
1/4W
R188
C155
3.3/100
D124
D125
HSS104-02
C195
0.01
C196
0.01
CT01
P116
P117
20mA
(33mA)
12
-12
RY101
ASR1026
RY101-1/2
RY101-2/2
Q115
2SC1845
Q116
2SC1845
Q118
2SC1740S
Q119
2SC1740S
Q120
2SA1115
Q121
2SC1845
Q122
2SB560
D115
D116
D117
D118
D119
D120
D121
D122
PD12E3B2
D123
D130
HSS104-02
R167
2.4k
R168
2.4k
R169
2.4k
R170
2.4k
R171
15.0k
R172
15.0k
R173
15.0k
R174
15.0k
R175
15.0k
1/4W
R176
15.0k
1/4W
R177
220
R178
15.0k
R179
2.7k
R180
4.7k
R181
82.0k
R183
68
R184
4.7k
R185
18.0k
R186
1.0k
R191
10.0k
C152
470/6
C153
130/25
C163
NP
0.22/50
C164
NP
0.22/50
R117
10
1/4W
R118
10
1/4W
C159
0.1
C160
0.1
C161
0.1
C162
0.1
P105
P106
P107
P108
P109
P110
P111
P112
15
16
17
18
19
20
21
22
AKT1012
J23
TO VIDEO Ass'y J23
12
VG
GND
-7
7
AEL1108
D213
C238
10/50
R190
560
KPE7
CN24
TO SELECT Ass'y J24
5
DG
-7
7
GND
-12
12
C226
100/25
C228
100/25
C227
100/25
C229
100/25
IC202
NJM79M05FA
VIN
VOUT
C210
0.01
C211
10/50
C222
AG
KPE7
CN17
TO VOL Ass'y J17
5
+5 MOTOR
DG
-12
12
GND
LED
C230
47/25
L204
ATX1008
R205
1.0
1/4W
J5
ADX1542
TO DSP Ass'y 1/7 CN5
12
-12
GND
+5 BACK
5
DG
ACK
RST
L203
ATX1008
RESET
2SC1740S
Q202
R211
1.0k
R212
100.0k
C218
10/50
D212
HSS104-02
C221
0.1/50
C215
220/10
C219
0.01
C220
0.01
R208
6.8k
HSS104-02
D215
AEX1003 (3V)
BT201
BACKUP BATTERY
⚠ LITHIUM BATTERY
A
B
C
D
E
F
5
6
7
8
9



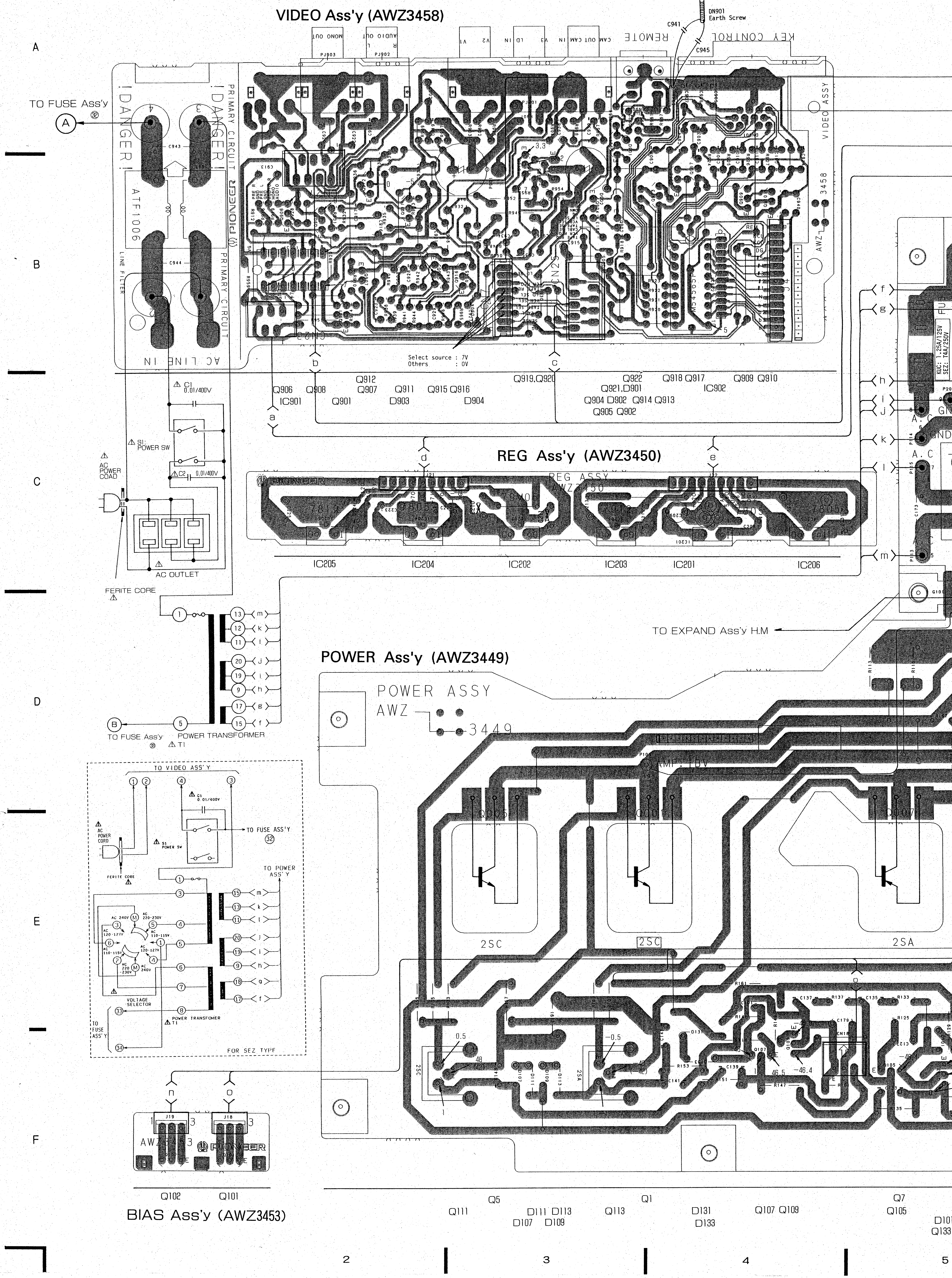
5
6
7
8
9
A
B
C
D
E
F
PROTECTION
DC DETECT
OVER LOAD DETECTOR
H.M (HARD MUTE)
TO EXPAND Ass'y H.M
P118
TO SP Ass'y J20
L
G
G
R
CN20 KPC4
AC DETECT
+48V (+42V)
-48V (-42V)
TO TRANSFORMER T1
P113
P114
P115
5
6
7
20mA (33mA)
RB602
D126
ACH1108 12000/63
C195 0.01
C196 0.01
G101
P116
P117
p105 15
p106 16
p107 17
p108 18
p109 19
p110 20
p111 21
p112 22
RY101 ASR1026
RY101-1/2
RY101-2/2
ASR1026
2SA1115 Q120
2SB560 Q122
2SC1845
2SC1740S
Q118
Q119
Q121
Q115
Q116
RD12E3B2
RD10ESB D140
HSS104-02
12
-12
R175 10k 1/4W
R176 15.0k 1/4W
R117 10 1/4W
R118 10 1/4W
R164 4.7 1/4W
R188 5.6k
C155 3.3/100
D124 D125
C174 0.047
12
VC
GND
-7
7
TO VIDEO Ass'y J23
AKT1012 J23
5
DG
-7
7
GND
-12
12
TO SELECT Ass'y J24
KPE7 CN24
5
+5 MOTOR
DG
-12
12
GND
LED
TO VOL Ass'y J17
KPE7 CN17
12
-12
GND
+5 BACK
5
DG
ACK
RST
TO DSP Ass'y 1/7 CN5
ADX1542 J5
AEL1108 D213
IC202 NJM79M05FA VIN VOUT
RESET
2SC1740S Q202
L204 ATX1008
L203 ATX1008
R205 10 1/4W
AEX1003 (3V) BT1201
BACKUP BATTERY
LITHIUM BATTERY

3.2.2 VIDEO Ass'y SCHEMATIC DIAGRAM


VIDEO Ass'y (AWZ3458)
MONITOR OUT
R903 68
R902 68
R901 68
VIDEO SELECT
VIDEO AMPLIFIER
CAM IN
CAM OUT
LD IN
MON 1
MON 2
MON 3
1Vp-p/75Ω
VISUAL INPUT/ OUTPUT
PJ901 AKB1183
C902 33/16
C901 33/16
R905 75
R909 100.0k
R904 75
R908 100.0k
IC901 UPD4066BC
C913 33/16
R912 100.0k
R916 100.0k
R919 100
Q906 2SC1740S
Q908 2SC1740S
R928 820
R929 1.5k
R931 1.0k
C916 100/10
R932 1.0k
C917 18p
R934 2.7k
R936 18
R933 330
R935 18
Q912 2SB562
Q911 2SD438
C919 0.01
C918 2200/6
C923 0.047
R937 10.0k
LD
REAR PANEL
R910 47.0k
R914 10.0k
DTA124ES
Q907
LD SEL
Q901
DTC124ES
INVERTER
INVERTER
A901
AC IN
P904
P903
A902
C944 0.01/AC400 (UL, CSA: AC125V)
ACG1002
ATF1006
L901
AC OUT
P905
P906
C943 0.01/AC400 (UL, CSA AC125V)
12
b5
Selected terminal:0V/3.6kOhms
Normal:High impedance
IC902
M54565P
R927 1.0k
R926 1.0k
R925 1.0k
R924 1.0k
R923 1.0k
R922 1.0k
R921 1.0k
R920 1.0k
#3
#2
#1
b1
b2
b3
b4
VCC
+5V
C915 10/50
FOR TEST MODE
5.6K
5.6K
#4
#3
#2
#1
#5
DN901
AKP1004
N
b5
b1
b2
b3
b4
GND
DTA143ES
Q909
Q910
DTC143ES
#4
C903 0.01
C904 0.01
C905 0.01
C906 0.01
C907 0.01
C908 0.01
C909 0.01
C910 0.01
C911 0.01
C912 0.01
C914 0.01
C941 1000p
C945 0.047
REAR PANEL
KEY CONTROL REMOTE IN
DIN connector
This line must be 5.0 volts.
SATELITE REMOTE IN
S socket
EN902 AKP1016
R961 1.0k
R962 1.0k
R963 1.0k
R966 220
R967 470
DTA143ES
Q922
LED DRIVE
HSS104-02
D902
R913 5.6k
R918 10.0k
SR AMP
Q902 2SC2458
Q905 2SC2458
R930 100
0.5
DG
Q921
DTC124ES
D901 RD5.1ESB
Q904 2SC2458
R917 1.0k
4.5
SR BUFFER
AUDIO OUT
1V/2.2K
L
R
PJ902
AKB1100
MONO
PJ903 AKB1139
C920 390p


6
7
8
9
A
B
C
D
E
F
LD H- SYNC DETECTOR
VIDEO AMPLIFIER FOR CAMERA
C923 0.047
R938 1.0k
R940 2.2k
D933 HSS104-02
R942 3.3k
C928 0.047
2SA933S
Q915
5.3
5.3
R939 68.0k
R941 8.2k
R943 47.0k
R944 22.0k
Q916 2SC1740S
R945 4.7k
R946 100
C929 1.0/50
7
C930 220/10
C933 220/10
C927 0.047
D904 RD4.7ESB2
R965 4.7k
R949 10 1/4W
F
R950 1.0k
C932 220/10
R948 820
C931 0.01
C934 39p
3.3
2SA933S Q919
-1.2
2.7
C935 0.01
C936 33/16
R953 5.6k
R954 2.2k
Q920 2SC3215(A)
C939 0.01
C938 470/6
R955 1.8k
R956 270
R957 68
R958 10.0k
R952 10 1/4W
C937 220/10
R951 10 1/4W
Fu
C942 1000/10
R959 10 1/4W
Fu
KPE5 CN23
7
-7
9
Vg
12
TO POWER Ass'y J23
CN7
LD REQ
VCR REQ
TAPE REQ
LD SEL
VCR SEL
TAPE SEL
CABLE SEL
SENSE
DG
TO EXPAND Ass'y J 7
Select source : 7V
Others : 0V
#5
5
Q913 DTA143ES
Q914 DTC143ES
Q917 DTA143ES
Q918 DTC143ES
R968 10.0k
1
12
DG
KPE10 CN25
5
UP
DOWN
DG
LD SEL
VCR SEL
TAPE SEL
CABLE SEL
VCR REQ
TAPE REQ
TO SELECT Ass'y J25
J4 ADX1541
C940 0.01
REM
KCU
KCD
DG
KOZ11 #5
KOZ10 #4
KOZ9 #3
KOZ8 #2
KOZ7 #1
KOZ6 ♮
KOZ5 b1
KOZ4 b2
KOZ3 b3
KOZ2 b4
KOZ1 b5
TO DSP Ass'y 1/7 CN4
CN27 KPE7
L
M
R
GND
L
GND
R
TO REAR Ass'y J27

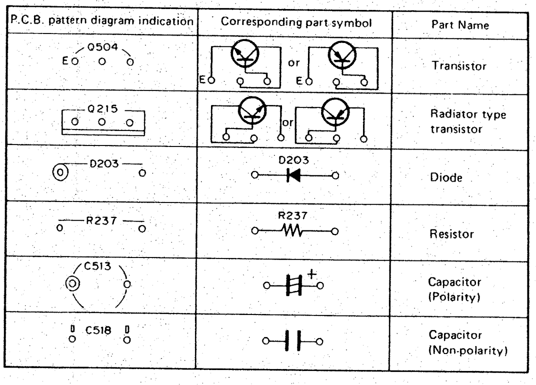
3.2.3. POWER Ass'y, REG Ass'y, BIAS Ass'y and VIDEO Ass'y P.C. BOARDS CONNECTION DIAGRAM



VIDEO Ass'y (AWZ3458)
DN901
Earth Screw
C941
C945
MONO OUT
AUDIO OUT
L
R
PJ903
PJ902
V1
V2
LD IN
V3
CAM IN
CAM OUT
REMOTE
KEY CONTROL
VIDEO ASSY
AWZ 3458
TO FUSE Ass'y
A
㉜
DANGER!
PRIMARY CIRCUIT
C943
C944
ATF1006
LINE FILTER
AC LINE IN
Select source : 7V
Others : 0V
a
b
c
Q906
Q908
IC901
Q912
Q907
Q901
Q911
D903
Q915 Q916
D904
Q919,Q920
Q922
Q921,D901
Q904 D902 Q914 Q913
Q905 Q902
Q918 Q917
IC902
Q909 Q910
C1
0.01/400V
S1:
POWER SW
AC
POWER
COAD
C2
0.01/400V
AC OUTLET
FERITE CORE
d
e
REG Ass'y (AWZ3450)
REG ASSY
AWZ3450
IC205
IC204
IC202
IC203
IC201
IC206
f
g
h
i
j
k
l
m
KUC: 1.25A/125V
SEZ: 1A/250V
A.C
GND
TO EXPAND Ass'y H.M
POWER Ass'y (AWZ3449)
POWER ASSY
AWZ 3449
AMP: 18V
2SC
2SC
2SA
①
⑤
⑬
⑫
⑪
⑳
⑲
⑨
⑰
⑮
B
TO FUSE Ass'y
㉝
POWER TRANSFORMER
T1
TO VIDEO ASS'Y
C1
0.01/400V
TO FUSE ASS'Y
㉜
AC
POWER
CORD
S1
POWER SW
FERITE CORE
TO POWER ASS'Y
AC 240V
AC 220-230V
AC 120-127V
AC 110-115V
VOLTAGE SELECTOR
POWER TRANSFOMER
T1
TO FUSE ASS'Y
㉝
㉞
FOR SEZ TYPE
n
o
J19
J18
Q102
Q101
BIAS Ass'y (AWZ3453)
0.5
48
-0.5
-48
46.5
-46.4
Q5
Q1
Q7
Q111
D111 D113
D107 D109
Q113
D131
D133
Q107 Q109
Q105
D101
Q133
1
2
3
4
5
A
B
C
D
E
F

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

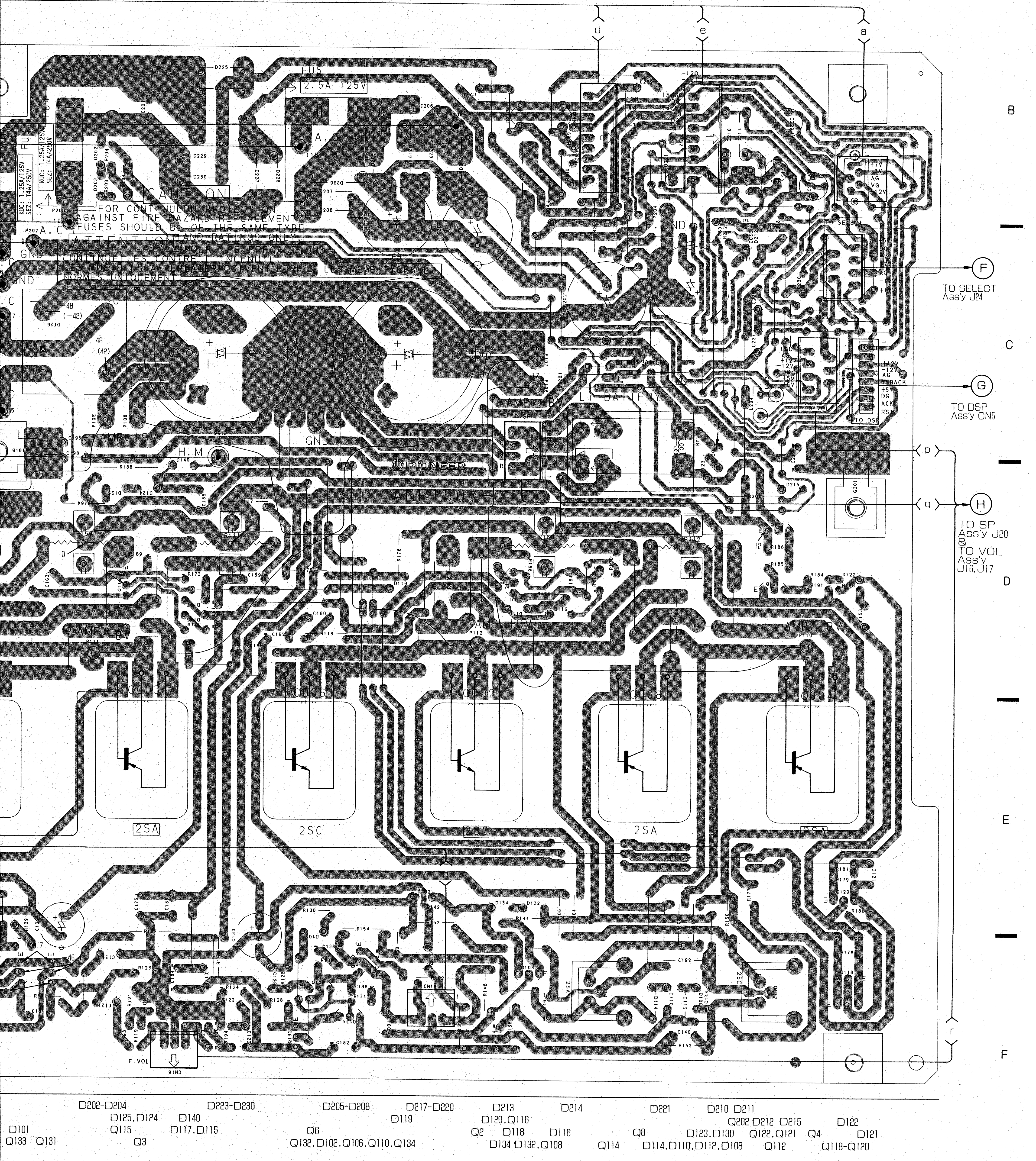


P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

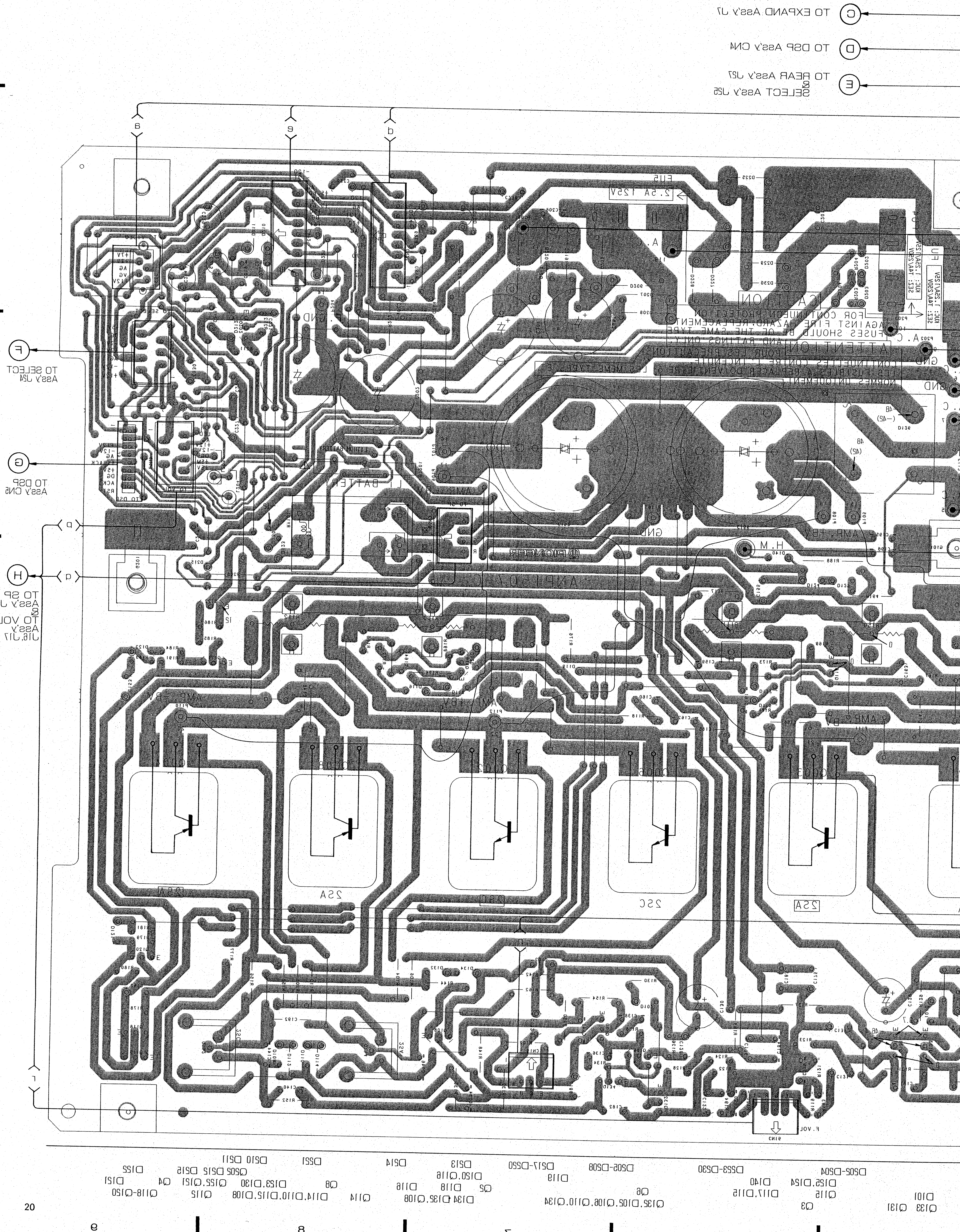
Others

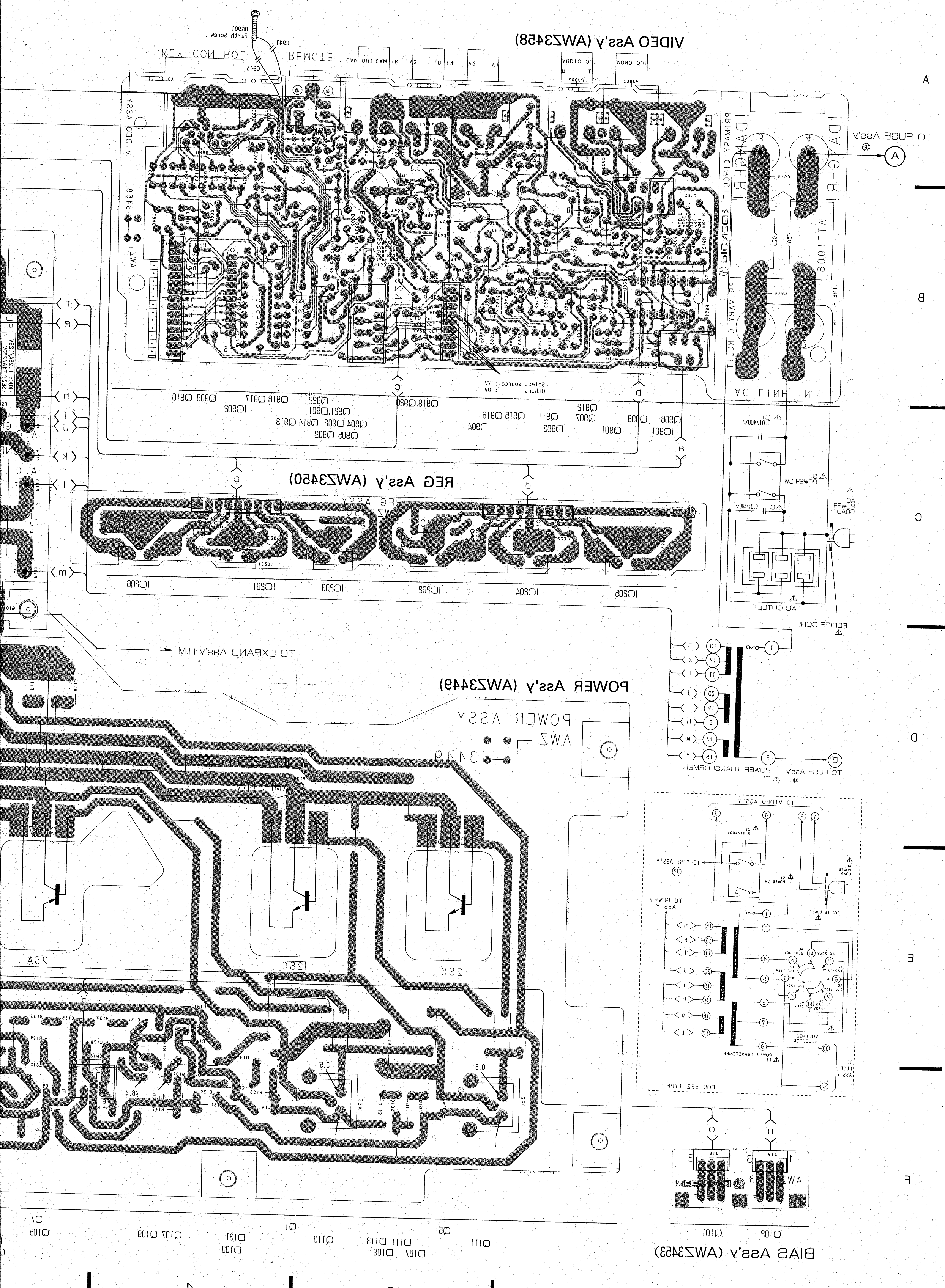
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with (double circles) shows negatine termianl.
4. The diode terminal marked with (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

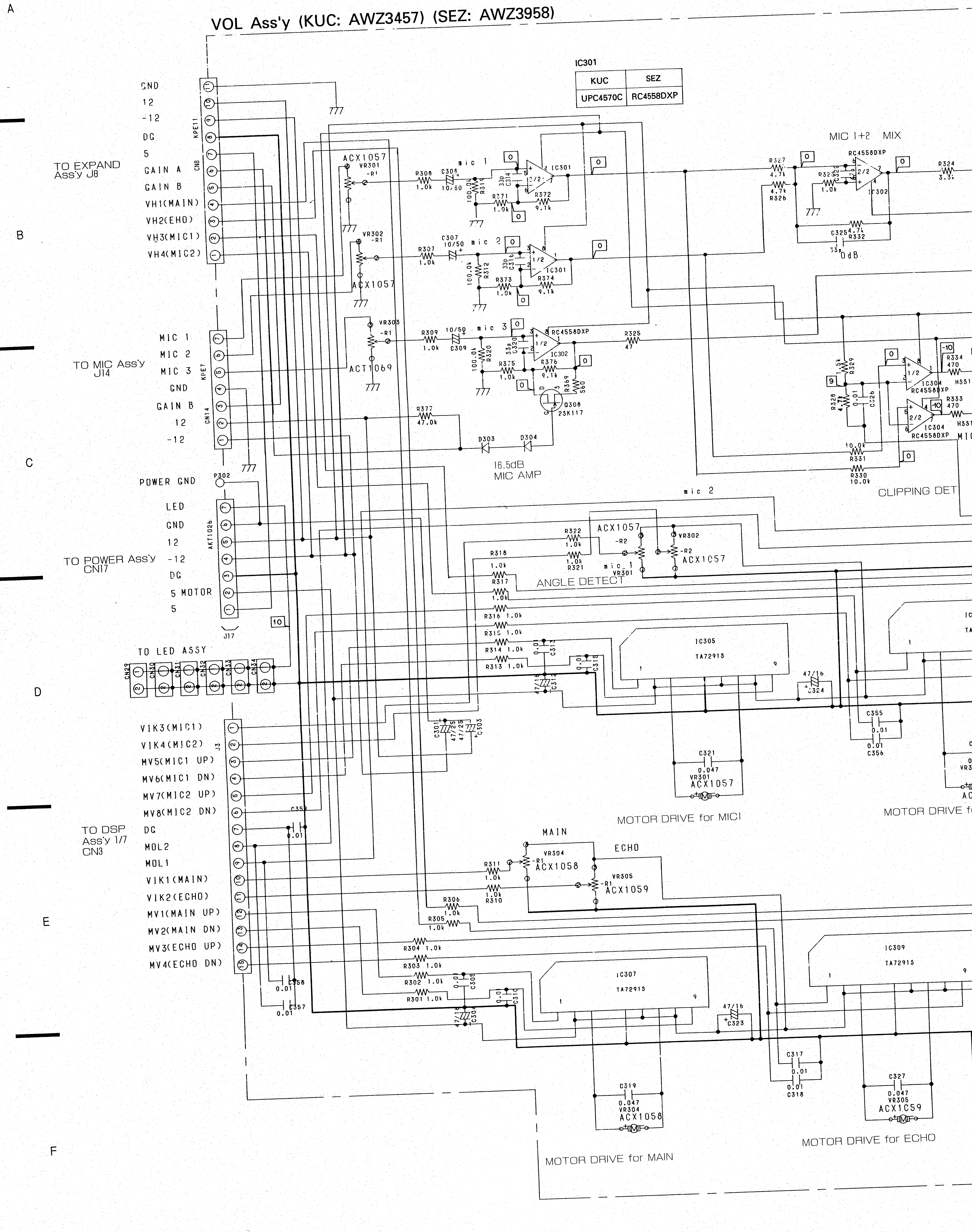

C TO EXPAND Ass'y J7
D TO DSP Ass'y CN4
E TO REAR Ass'y J27 & SELECT Ass'y J25
F TO SELECT Ass'y J24
G TO DSP Ass'y CN5
H TO SP Ass'y J20 & TO VOL Ass'y J16, J17
d
e
a
p
q
r
FU5 2.5A 125V
FU4
FU3
KUC: 1.25A/125V SEZ: T4A/250V
KUC: 1.25A/125V SEZ: T4A/250V
CAUTION
FOR CONTINUEON PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY.
ATTENTION
POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE, LES FUSIBLES A REPLACER DOIVENT ETRE LES MEME TYPES ET NORMES UNIQUEMENT.
A.C
GND
48 (−42)
48 (42)
AMP +BV
H.M
GND
PIONEER
ANP1507-C
LITHIUM BATTERY
LI BATTERY
TO VIDEO
TO SELECT
TO SP
TO VOL
TO DSP
+12V −12V AG +5BACK +5V DG ACK RST
Q003 Q006 Q002 Q008 Q004
2SA 2SC 2SC 2SA 2SA
F.VOL
CN16
CN11
D202−D204
D223−D230
D205−D208
D217−D220
D213
D214
D221
D210 D211
D125, D124
D140
D119
D120, Q116
Q202 D212 D215
D122
D101
Q115
D117, D115
Q6
Q2
D118
D116
Q8
D123, D130
Q122, Q121
Q4
D121
Q133 Q131
Q3
Q132, D102, Q106, Q110, Q134
D134 D132, Q108
Q114
D114, D110, D112, D108
Q112
Q118−Q120

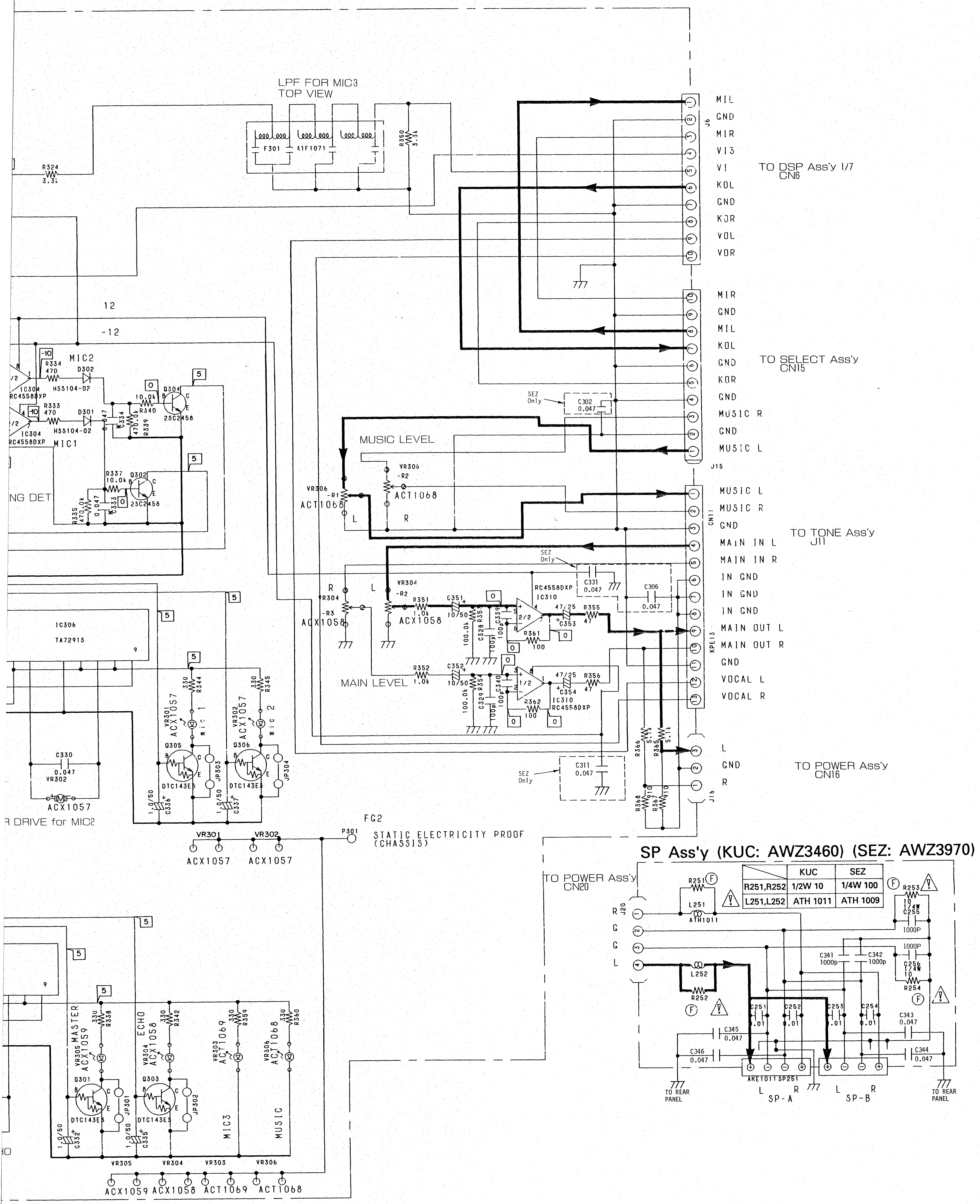
NOTE:
This picture shows the foil side of the printed circuit.


A
B
C
D
C
TO EXPAND Ass'y J7
D
TO DSP Ass'y CN4
E
TO REAR Ass'y J27
&
SELECT Ass'y J25
a
e
b
F
TO SELECT Ass'y J24
G
TO DSP Ass'y CN5
H
TO SP Ass'y J20
&
TO VOL Ass'y J16,J17
2.5A 125V
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY.
ATTENTION
POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE LES FUSIBLES A REPLACER DOIVENT ETRE DE MEME TYPE ET CONFORMES AUX NORMES INITIALEMENT
GND
A.C
LITHIUM BATTERY
AMP +B
H.M
PIONEER
ANP1507-C
AMP -B
2SA
2SC
CN116
F.VOL
CN118
Q118-Q120
D121
D122
Q4
Q112
Q121,Q122,Q131
Q202 D212 D215
D210 D211
D221
D123,D130
Q8
D114,D110,D112,D108
Q114
D14
D116
D134 D132,Q108
D118
Q2
D120,Q116
D213
D119
D217-D220
Q6
Q132,D102,Q106,Q110,Q134
D205-D208
D223-D230
D140
D117,D115
Q115
D125,D124
D202-D204
Q3
D101
Q133 Q131


VIDEO Ass'y (AWZ3458)
DN901 Earth Screw
C941
KEY CONTROL
REMOTE
CAM OUT
CAM IN
V3
LD IN
V2
V1
AUDIO OUT
MONO OUT
DANGER!
PRIMARY CIRCUIT
ATF1006
PIONEER
LINE FILTER
AC LINE IN
TO FUSE Ass'y
A
Select source : 7V
Others : 0V
IC301
Q301
D903
D904
IC902
REG Ass'y (AWZ3450)
REG ASSY
AWZ3450
IC206
IC201
IC203
IC202
IC204
IC205
S1 POWER SW
C1 0.01/400V
C2 0.01/400V
AC POWER CORD
AC OUTLET
FERITE CORE
TO EXPAND Ass'y H.M
POWER Ass'y (AWZ3449)
POWER ASSY
AWZ 3449
AMP 1BY
POWER TRANSFORMER
T1
TO FUSE Ass'y
B
TO VIDEO ASS'Y
TO FUSE ASS'Y
TO POWER ASS'Y
VOLTAGE SELECTOR
FOR SEZ TYPE
2SA
2SC
BIAS Ass'y (AWZ3453)
Q101
Q102
Q1
Q5
Q7
Q105
Q107
Q109
Q111
Q113
D107
D109
D111
D113
D131
D133
A
B
C
D
E
F
1
2
3
4
5

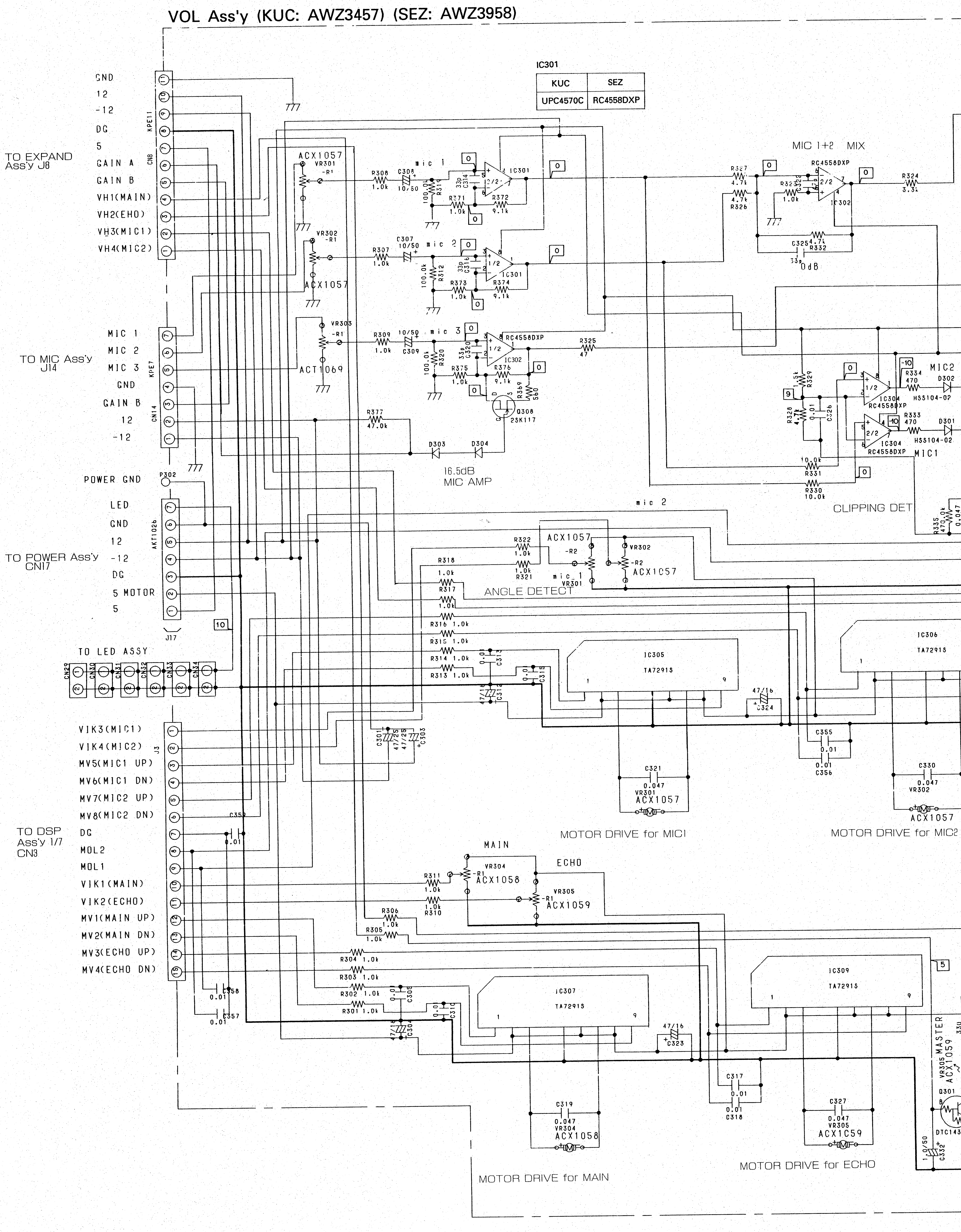
3.3.2 VOL Ass'y and SP Ass'y SCHEMATIC DIAGRAM

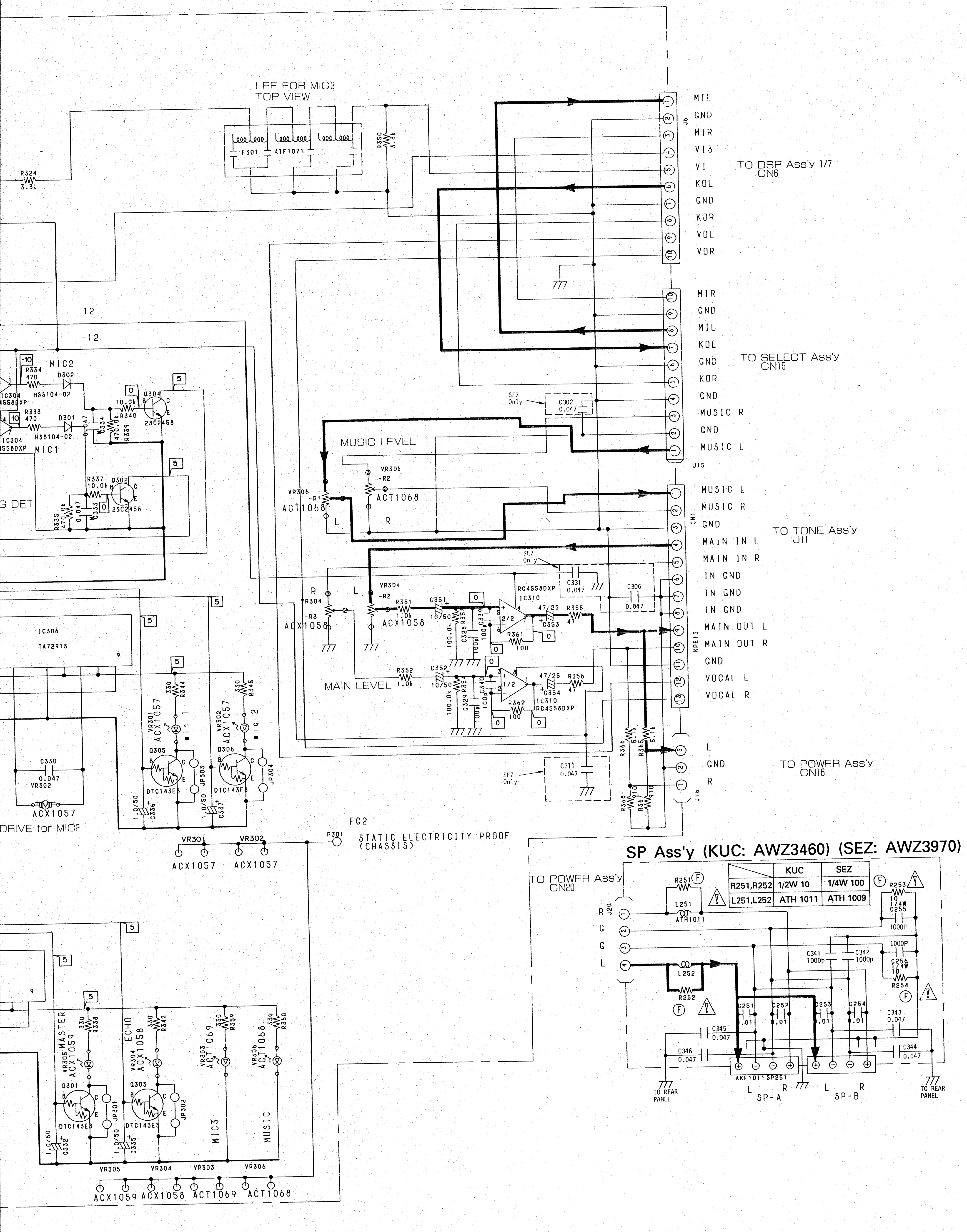

A
B
C
D
E
F
VOL Ass'y (KUC: AWZ3457) (SEZ: AWZ3958)
IC301
KUC
SEZ
UPC4570C
RC4558DXP
TO EXPAND Ass'y J8
CN8
KPE11
GND
12
-12
DG
5
GAIN A
GAIN B
VH1(MAIN)
VH2(EHO)
VH3(MIC1)
VH4(MIC2)
TO MIC Ass'y J14
CN14
KPE7
MIC 1
MIC 2
MIC 3
GND
GAIN B
12
-12
POWER GND
P302
TO POWER Ass'y CN17
AKT1026
LED
GND
12
-12
DG
5 MOTOR
5
J17
10
TO LED ASSY
CN29
CN30
CN31
CN32
CN33
CN34
TO DSP Ass'y 1/7 CN3
J3
VIK3(MIC1)
VIK4(MIC2)
MV5(MIC1 UP)
MV6(MIC1 DN)
MV7(MIC2 UP)
MV8(MIC2 DN)
DG
MOL2
MOL1
VIK1(MAIN)
VIK2(ECHO)
MV1(MAIN UP)
MV2(MAIN DN)
MV3(ECHO UP)
MV4(ECHO DN)
ACX1057
VR301 -R1
VR302 -R1
ACX1057
VR303 -R1
ACT1069
R308 1.0k
C308 10/50
mic 1
R319 100.0k
C314 33p
IC301 2/2
R371 1.0k
R372 9.1k
R307 1.0k
C307 10/50
mic 2
R312 100.0k
C316 33p
IC301 1/2
R373 1.0k
R374 9.1k
R309 1.0k
C309 10/50
mic 3
R320 100.0k
C320 33p
RC4558DXP
IC302 1/2
R375 1.0k
R376 9.1k
R369 560
Q308 2SK117
R377 47.0k
D303
D304
16.5dB MIC AMP
R325 47
MIC 1+2 MIX
RC4558DXP
R327 4.7k
R326 4.7k
R323 1.0k
C322
IC302 2/2
C325 33p
R332 4.7k
0dB
R324 3.3k
R329 1.5k
R328 4.7k
C326 0.01
IC304 1/2
IC304 2/2
RC4558DXP
R334 470
R333 470
-10
R331 10.0k
R330 10.0k
CLIPPING DET
mic 2
ACX1057
VR302 -R2
ACX1C57
R322 1.0k
R321 1.0k
mic 1
VR301
R318 1.0k
R317 1.0k
ANGLE DETECT
R316 1.0k
R315 1.0k
R314 1.0k
R313 1.0k
C313 0.01
C315 0.01
C312 47/16
IC305
TA7291S
C324 47/16
C301 47/25
C303 47/25
C321 0.047
VR301
ACX1057
MOTOR DRIVE for MIC1
C355
C356 0.01
MOTOR DRIVE fo
C359 0.01
MAIN
ECHO
VR304 -R1
ACX1058
VR305 -R1
ACX1059
R311 1.0k
R310 1.0k
R306 1.0k
R305 1.0k
R304 1.0k
R303 1.0k
R302 1.0k
R301 1.0k
C305 0.01
C310 0.01
C304 47/16
C358 0.01
C357 0.01
IC307
TA7291S
C323 47/16
IC309
TA7291S
C317 0.01
C318 0.01
C319 0.047
VR304
ACX1058
MOTOR DRIVE for MAIN
C327 0.047
VR305
ACX1C59
MOTOR DRIVE for ECHO


LPF FOR MIC3
TOP VIEW
F301
41F1071
R350 3.3k
R324 3.3k
J6
MIL
GND
MIR
VI3
VI
KOL
GND
KOR
VOL
VOR
TO DSP Ass'y 1/7 CN6
MIR
GND
MIL
KOL
GND
KOR
GND
MUSIC R
GND
MUSIC L
TO SELECT Ass'y CN15
J15
SEZ Only
C302 0.047
MUSIC LEVEL
VR306 -R1 ACT1068
VR306 -R2 ACT1068
L
R
CN11
MUSIC L
MUSIC R
GND
MAIN IN L
MAIN IN R
IN GND
IN GND
IN GND
MAIN OUT L
MAIN OUT R
GND
VOCAL L
VOCAL R
KPE13
TO TONE Ass'y J11
SEZ Only
C331 0.047
C306 0.047
RC4558DXP IC310
VR304 -R2
VR304 -R3 ACX1058
R351 1.0k
C351 10/50
C339 100p
C328 100.0k
R353
R355 47
C353 47/25
R361 100
MAIN LEVEL
R352 1.0k
C352 10/50
C340 100p
R354 100.0k
C329 100p
R356 47
C354 47/25
R362 100
IC310 RC4558DXP
12
-12
MIC2
R334 470
D302 HSS104-02
IC304 RC4558DXP
R333 470
D301 HSS104-02
MIC1
R340 10.0k
R334 470.0k
R339
Q304 2SC2458
R337 10.0k
Q302 2SC2458
R335 470.0k
R333
NG DET
IC306 TA7291S
R344 330
VR301 ACX1057 mic 1
Q305 DTC143ES
C336 1.0/50
JP303
R345 330
VR302 ACX1057 mic 2
Q306 DTC143ES
C337 1.0/50
JP304
C330 0.047
VR302
ACX1057
R DRIVE for MIC2
VR301 VR302
ACX1057 ACX1057
FG2
P301
STATIC ELECTRICITY PROOF (CHASSIS)
R366 5.1k
R365 5.1k
R368 910
R367 910
SEZ Only
C311 0.047
J16
L
GND
R
TO POWER Ass'y CN16
R338 330
VR305 MASTER ACX1059
Q301 DTC143ES
JP301
C332 1.0/50
R342 330
ECHO VR304 ACX1058
Q303 DTC143ES
JP302
C335 1.0/50
R359 330
VR303 ACT1069
MIC3
R360 330
VR306 ACT1068
MUSIC
VR305 VR304 VR303 VR306
ACX1059 ACX1058 ACT1069 ACT1068
SP Ass'y (KUC: AWZ3460) (SEZ: AWZ3970)
TO POWER Ass'y CN20
J20
R G G L
R251 F
L251 ATH1011
L252
R252 F
C345 0.047
C346 0.047
R253 10 1/4W
C255 1000P
C256 1000P
R254 10 1/4W
C341 1000p
C342 1000p
C251 .01
C252 .01
C253 .01
C254 .01
C343 0.047
C344 0.047
AKE1011 SP251
SP-A L R
SP-B L R
TO REAR PANEL
TO REAR PANEL

	KUC	SEZ
R251,R252	1/2W 10	1/4W 100
L251,L252	ATH 1011	ATH 1009

3.3.2 VOL Ass'y and SP Ass'y SCHEMATIC DIAGRAM

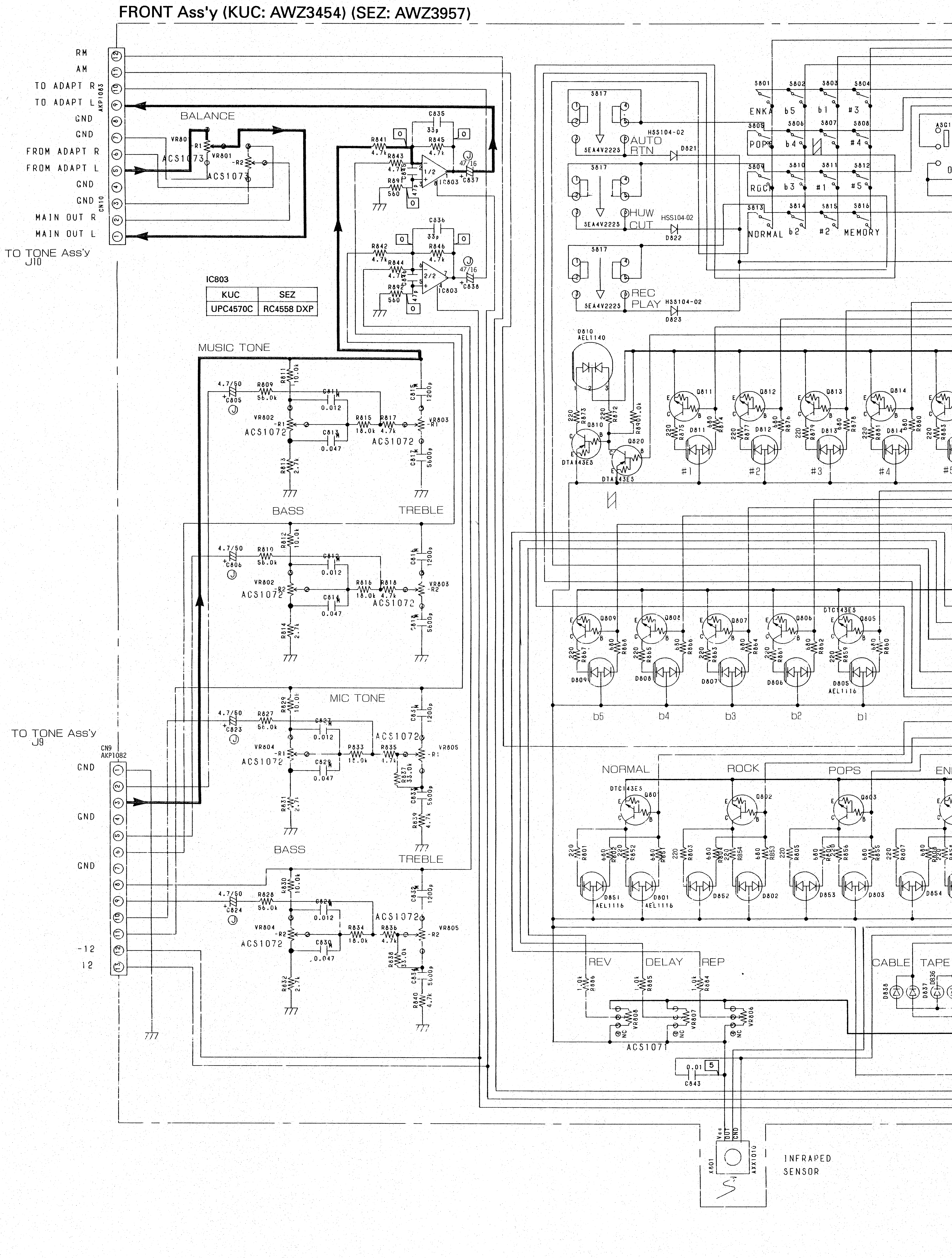

VOL Ass'y (KUC: AWZ3457) (SEZ: AWZ3958)
IC301
KUC | SEZ
UPC4570C | RC4558DXP
TO EXPAND Ass'y J8
GND
12
-12
DG
5
GAIN A
GAIN B
VH1(MAIN)
VH2(EHO)
VH3(MIC1)
VH4(MIC2)
KPE11
CN8
TO MIC Ass'y J14
MIC 1
MIC 2
MIC 3
GND
GAIN B
12
-12
KPE7
CN14
POWER GND
P302
TO POWER Ass'y CN17
LED
GND
12
-12
DG
5 MOTOR
5
AKT1026
J17
TO LED ASSY
CN29
CN30
CN31
CN32
CN33
CN34
TO DSP Ass'y 1/7 CN3
VIK3(MIC1)
VIK4(MIC2)
MV5(MIC1 UP)
MV6(MIC1 DN)
MV7(MIC2 UP)
MV8(MIC2 DN)
DG
MOL2
MOL1
VIK1(MAIN)
VIK2(ECHO)
MV1(MAIN UP)
MV2(MAIN DN)
MV3(ECHO UP)
MV4(ECHO DN)
J3
ACX1057
VR301
mic 1
mic 2
mic 3
VR302
VR303
ACT1069
IC301
IC302
RC4558DXP
Q308
2SK117
D303
D304
16.5dB
MIC AMP
MIC 1+2 MIX
0dB
CLIPPING DET
MIC2
MIC1
IC304
RC4558DXP
D301
D302
HSS104-02
ANGLE DETECT
ACX1057
VR301
VR302
IC305
TA7291S
IC306
TA7291S
MOTOR DRIVE for MIC1
MOTOR DRIVE for MIC2
MAIN
ECHO
VR304
ACX1058
VR305
ACX1059
IC307
TA7291S
IC309
TA7291S
MOTOR DRIVE for MAIN
MOTOR DRIVE for ECHO
MASTER
DTC143
1
2
3
4
5
A
B
C
D
E
F


LPF FOR MIC3
TOP VIEW
F301
ATF1071
R350 3.3k
R324 3.3k
12
-12
MIC2
R334 470
D302
HSS104-02
IC304
R333 470
D301
HSS104-02
MIC1
IC304
Q304
2SC2458
10.0k R340
R334 0.047
R339 470.0k
R337 10.0k
Q302
2SC2458
G DET
R335 470.0k
R333
IC306
TA7291S
MIC1
MIC2
C330 0.047
VR302
ACX1057
DRIVE for MIC2
VR301 ACX1057
R344 330
Q305
DTC143ES
JP303
C336 1.0/50
VR302 ACX1057
R345 330
Q306
DTC143ES
JP304
C337 1.0/50
VR301 VR302
ACX1057 ACX1057
FG2
P301
STATIC ELECTRICITY PROOF (CHASSIS)
MIL GND MIR VI3 VI KOL GND KOR VOL VOR
J6
TO DSP Ass'y 1/7 CN6
MIR GND MIL KOL GND KOR GND MUSIC R GND MUSIC L
J15
TO SELECT Ass'y CN15
SEZ Only
C302 0.047
MUSIC LEVEL
VR306 -R1
VR306 -R2
ACT1068
L R
MUSIC L MUSIC R GND MAIN IN L MAIN IN R IN GND IN GND IN GND MAIN OUT L MAIN OUT R GND VOCAL L VOCAL R
CN11
KPE13
TO TONE Ass'y J11
SEZ Only
C331 0.047
C306 0.047
RC4558DXP
IC310
VR304 -R2
VR304 -R3
ACX1058
R351 1.0k
C351 10/50
R353 100.0k
C328 100p
C339
2/2
47/25
R355 47
C353
R361 100
R352 1.0k
C352 10/50
MAIN LEVEL
R354 100.0k
C329 100p
C340
1/2
47/25
R356 47
C354
IC310
RC4558DXP
R362 100
R366 5.1k
R365 5.1k
R368 10
R367 10
C311 0.047
SEZ Only
L GND R
J16
TO POWER Ass'y CN16
TO POWER Ass'y CN20
J20
R G G L
R251
L251
ATH1011
L252
R252
R253
R254
C255
C256
C341 1000p
C342 1000p
C251 .01
C252 .01
C253 .01
C254 .01
C343 0.047
C344 0.047
C345 0.047
C346 0.047
AKE1011 SP251
L R
SP-A
L R
SP-B
TO REAR PANEL
TO REAR PANEL
VR305 MASTER ACX1059
R338 330
Q301
DTC143ES
JP301
C332 1.0/50
VR304 ECHO ACX1058
R342 330
Q303
DTC143ES
JP302
C335 1.0/50
VR303 ACT1069
R359 330
MIC3
VR306 ACT1068
R360 330
MUSIC
VR305 VR304 VR303 VR306
ACX1059 ACX1058 ACT1069 ACT1068

SP Ass'y (KUC: AWZ3460) (SEZ: AWZ3970)

	KUC	SEZ
R251,R252	1/2W 10	1/4W 100
L251,L252	ATH 1011	ATH 1009

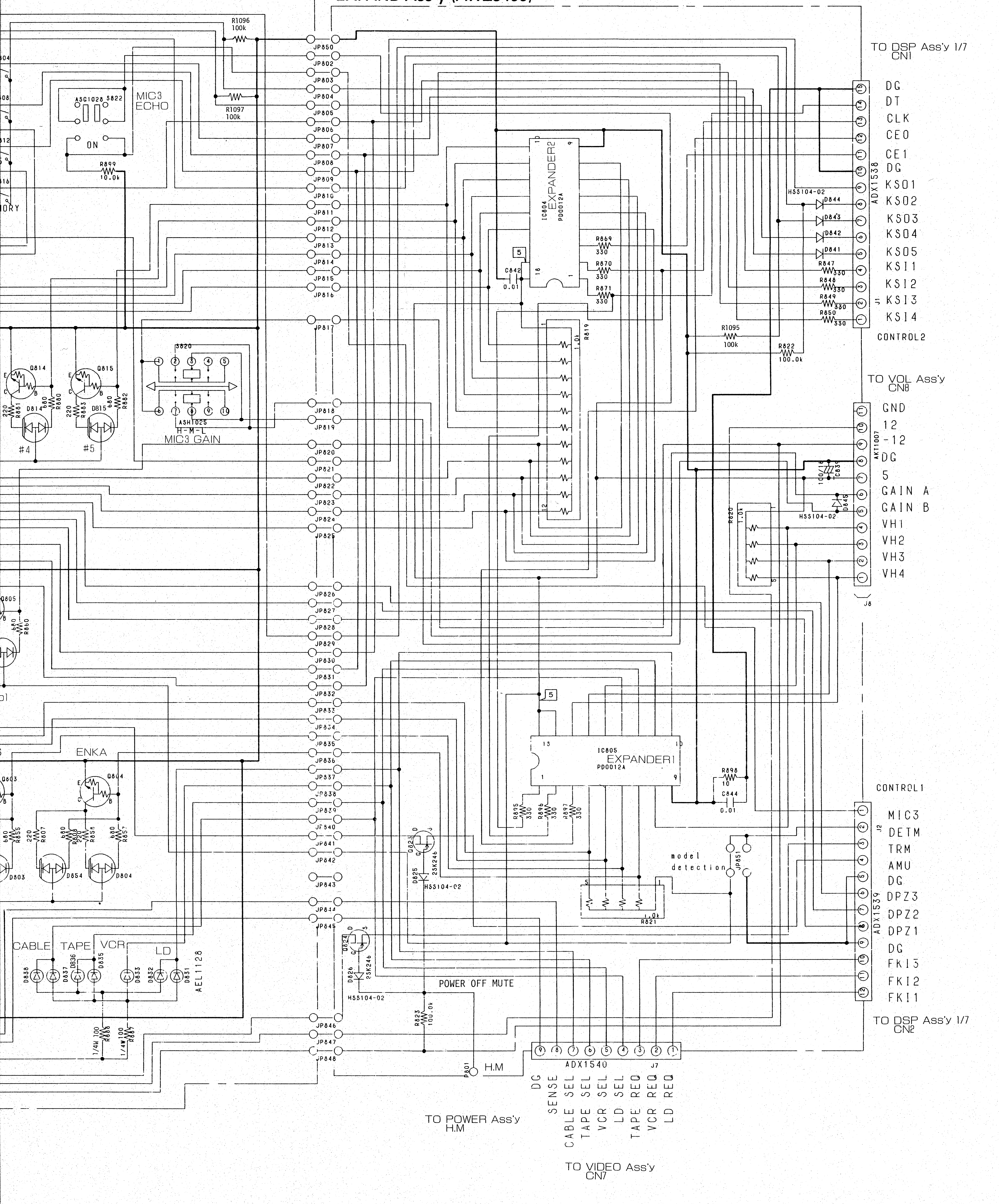
3.3.3 FRONT Ass'y and EXPAND Ass'y SCHEMATIC DIAGRAM


FRONT Ass'y (KUC: AWZ3454) (SEZ: AWZ3957)
RM
AM
TO ADAPT R
TO ADAPT L
GND
FROM ADAPT R
FROM ADAPT L
MAIN OUT R
MAIN OUT L
CN10
AKP1083
TO TONE Ass'y
J10
BALANCE
VR801
ACS1073
C835
33p
R841
4.7k
R845
4.7k
R843
R891
560
1/2
IC803
C837
47/16
C836
R842
R846
R844
R892
2/2
C838
MUSIC TONE
R809
56.0k
C805
4.7/50
R811
10.0k
C811
0.012
C813
0.047
R813
2.7k
R815
18.0k
R817
4.7k
C815
1200p
C817
5600p
VR802
VR803
ACS1072
BASS
TREBLE
R810
R812
C806
C812
C814
R814
R816
R818
C816
C818
MIC TONE
R827
R829
C823
C827
C829
R831
R833
R835
R837
33.0k
C831
C833
R839
VR804
VR805
R828
R830
C824
C826
C830
R832
R834
R836
R838
C832
C834
R840
TO TONE Ass'y
J9
CN9
AKP1082
GND
-12
12
S817
SEA4V2225
HSS104-02
AUTO RTN
D821
HUW CUT
D822
REC PLAY
D823
S801
S802
S803
S804
S805
S806
S807
S808
S809
S810
S811
S812
S813
S814
S815
S816
ENKA
b5
b1
#3
POPS
b4
#4
ROCK
b3
#1
#5
NORMAL
b2
#2
MEMORY
ASC1
D810
AEL1140
R873
R872
R890
1.0k
Q810
Q820
DTA143ES
Q811
Q812
Q813
Q814
R875
R874
R877
R876
R879
R878
R881
R880
R883
D811
D812
D813
D814
#1
#2
#3
#4
#5
Q809
Q808
Q807
Q806
Q805
DTC143ES
R867
R868
R865
R866
R863
R864
R861
R862
R859
R860
D809
D808
D807
D806
D805
AEL1116
b5
b4
b3
b2
b1
NORMAL
ROCK
POPS
Q801
Q802
Q803
R801
R802
R861
R803
R804
R853
R805
R806
R855
R807
D851
D801
D852
D802
D853
D803
D854
REV
DELAY
REP
R886
R885
R884
1.0k
VR808
VR807
VR806
NC
ACS1071
0.01
C843
CABLE
TAPE
D838
D837
D836
Vcc
OUT
GND
X801
AXX1010
INFRARED SENSOR
A
B
C
D
E
F
1
2
3
4
5

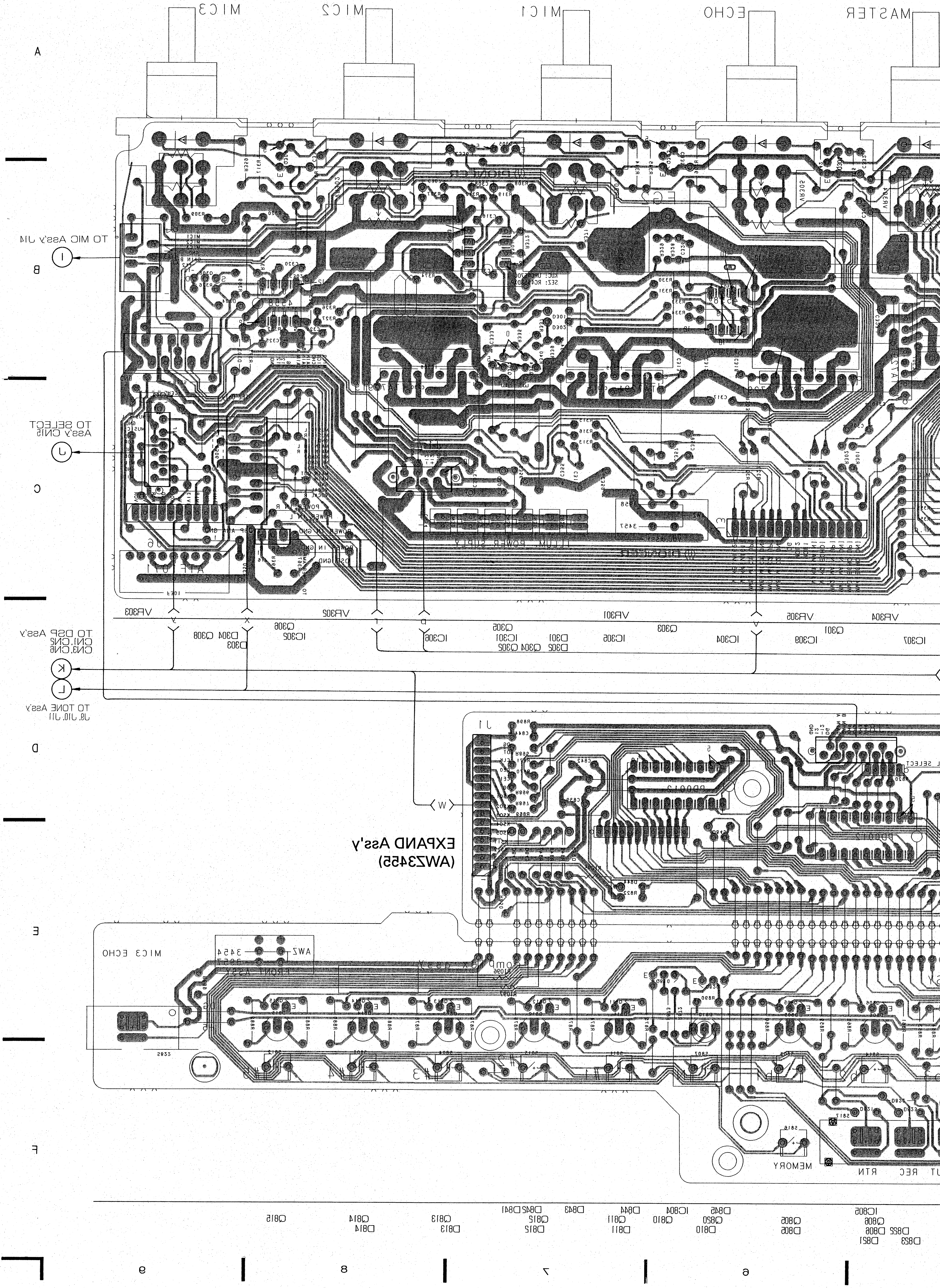
IC803

KUC	SEZ
UPC4570C	RC4558 DXP

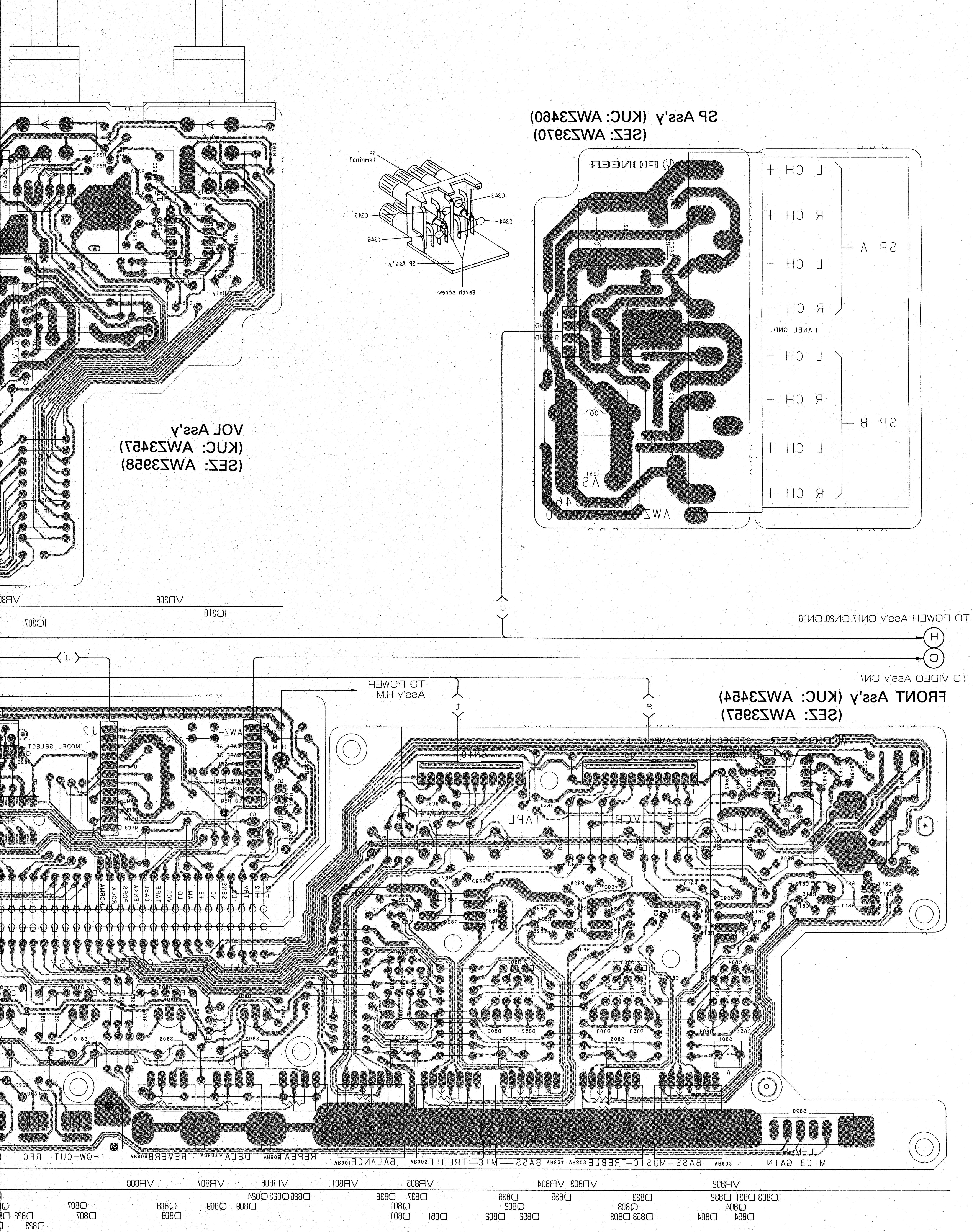
EXPAND Ass'y (AWZ3455)


R1096 100k
R1097 100k
ASG1028 S822
MIC3 ECHO
ON
R899 10.0k
JP850
JP802
JP803
JP804
JP805
JP806
JP807
JP808
JP809
JP810
JP811
JP812
JP813
JP814
JP815
JP816
JP817
JP818
JP819
JP820
JP821
JP822
JP823
JP824
JP825
JP826
JP827
JP828
JP829
JP830
JP831
JP832
JP833
JP834
JP835
JP836
JP837
JP838
JP839
JP840
JP841
JP842
JP843
JP844
JP845
JP846
JP847
JP848
S820
ASH1025
H-M-L
MIC3 GAIN
Q814
Q815
D814
D815
R881
R880
R883
R882
220
680
#4
#5
Q805
R860
ENKA
Q803
Q804
R855
R807
R856
R858
R857
D803
D854
D804
CABLE
TAPE
VCR
LD
D838
D837
D836
D835
D833
D832
D831
AEL1128
R888
R887
1/4W 100
IC804
EXPANDER2
PD0012A
C842 0.01
R869 330
R870 330
R871 330
R819 1.0k
IC805
EXPANDER1
PD0012A
R898 10
C844 0.01
R895 330
R896 330
R897 330
R821 1.0k
model detection
JP851
Q825
2SK246
D825
HSS104-02
Q824
2SK246
D826
HSS104-02
POWER OFF MUTE
R823 100.0k
P801
H.M
TO DSP Ass'y 1/7 CN1
ADX1538
J1
DG
DT
CLK
CE0
CE1
DG
KS01
KS02
KS03
KS04
KS05
KSI1
KSI2
KSI3
KSI4
HSS104-02
D844
D843
D842
D841
R847 330
R848 330
R849 330
R850 330
CONTROL2
R1095 100k
R822 100.0k
TO VOL Ass'y CN8
AKT1007
J8
GND
12
-12
DG
5
GAIN A
GAIN B
VH1
VH2
VH3
VH4
C839 100/16
D845
HSS104-02
R820 1.0k
CONTROL1
ADX1539
J2
MIC3
DETM
TRM
AMU
DG
DPZ3
DPZ2
DPZ1
DG
FKI3
FKI2
FKI1
TO DSP Ass'y 1/7 CN2
ADX1540
J7
DG
SENSE
CABLE SEL
TAPE SEL
VCR SEL
LD SEL
TAPE REQ
VCR REQ
LD REQ
TO POWER Ass'y H.M
TO VIDEO Ass'y CN7

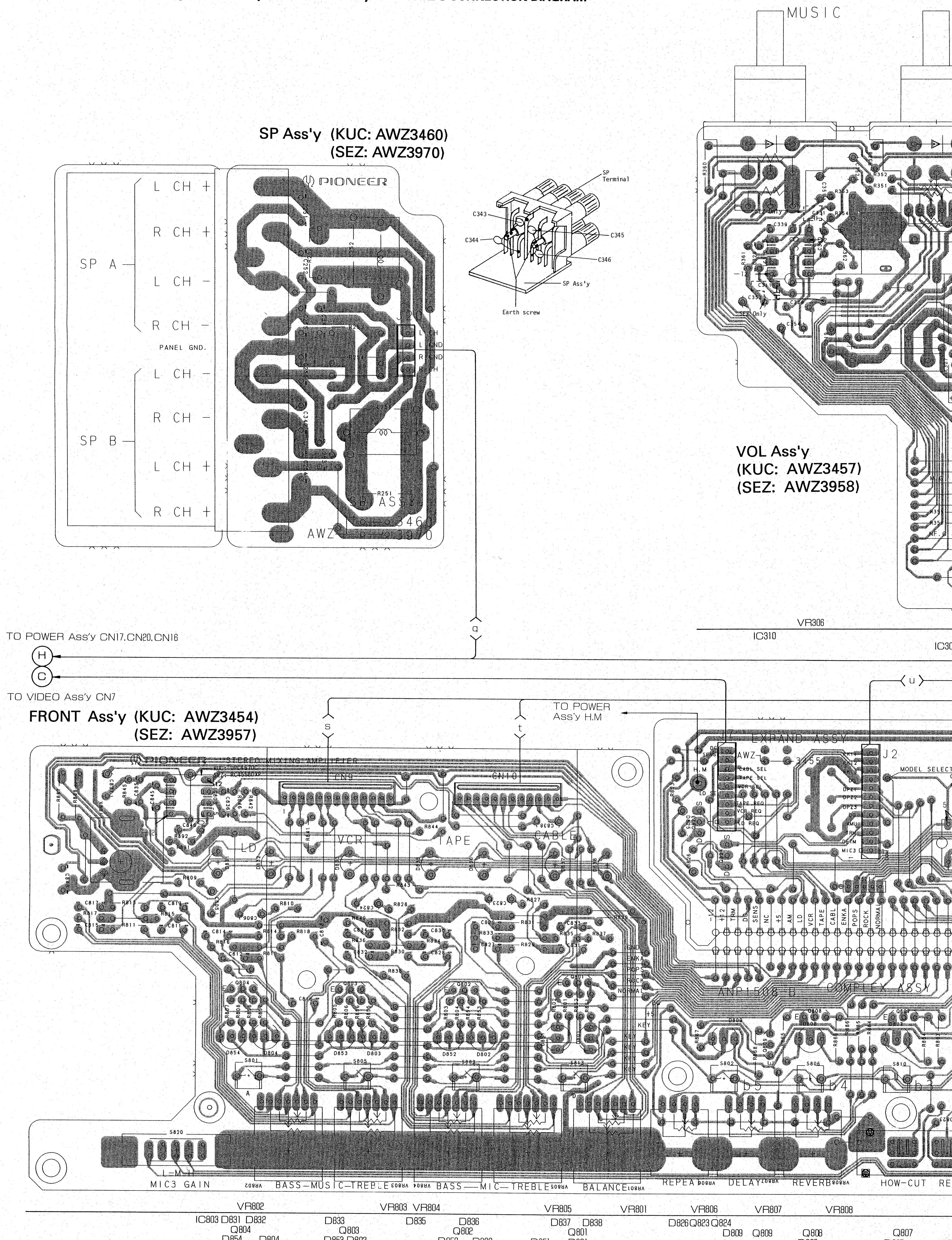
3.3 VOL ASS'Y, SP ASS'Y, FRONT ASS'Y AND EXPAND ASS'Y

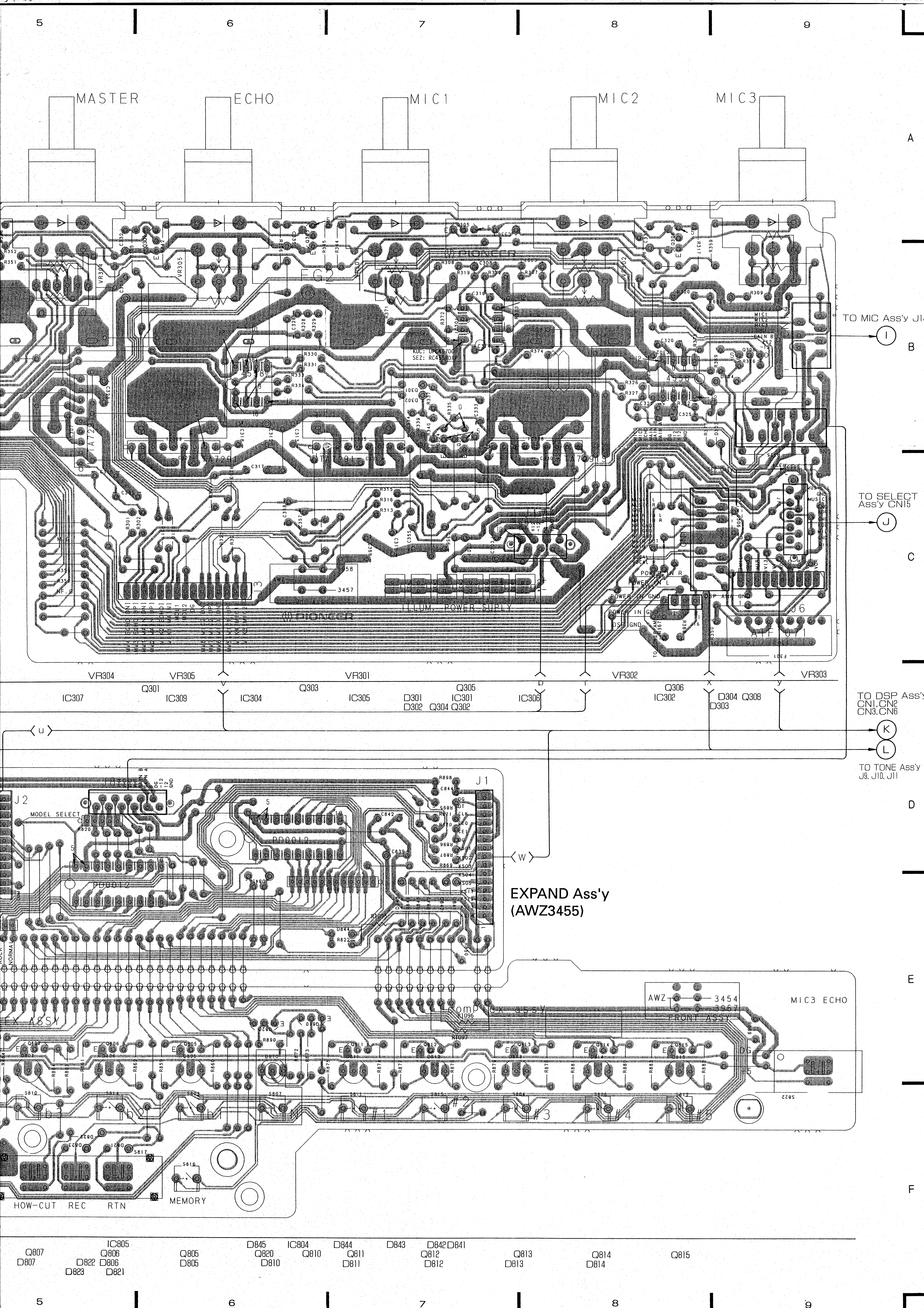

MIC3
MIC2
MIC1
ECHO
MASTER
A
B
C
D
E
F
TO MIC Ass'y J14
I
TO SELECT Ass'y CN15
J
TO DSP Ass'y CN1,CN2 CN3,CN6
K
L
TO TONE Ass'y J9,J10,J11
VR303
VR302
VR301
VR305
VR304
D304 Q308 D303
Q306 IC302
IC306
Q305 IC301 Q302 Q304 Q305
D301 D302
IC305
Q303
IC304
Q301 IC309
IC307
W
EXPAND Ass'y (AWZ3455)
MIC3 ECHO
AWZ 3454
FRONT ASS'Y
MEMORY
RTN
REC
Q815
Q814 D814
Q813 D813
D841 D842 Q812 D812
D843
D844 Q811 D811
IC804 Q810
D845 Q820 D810
Q806 D806
IC805 Q806 D808 D822 D821 D823
9
8
7
6

NOTE:
This picture shows the foil side of the printed circuit.


MUSIC
SP Ass'y (KUC: AWZ3460)
(SEZ: AWZ3970)
SP Terminal
C343
C344
C345
C346
SP Ass'y
Earth screw
L CH +
R CH +
L CH −
R CH −
SP A
PANEL GND.
L CH −
R CH −
L CH +
R CH +
SP B
VOL Ass'y
(KUC: AWZ3457)
(SEZ: AWZ3958)
VR306
IC310
IC307
TO POWER Ass'y CN17,CN20,CN16
TO VIDEO Ass'y CN7
TO POWER Ass'y H.M
FRONT Ass'y (KUC: AWZ3454)
(SEZ: AWZ3957)
CN9
CN10
CABLE
TAPE
VCR
LD
MIC3 GAIN
BASS—MUSIC—TREBLE
BASS—MIC—TREBLE
BALANCE
REPEAT
DELAY
REVERB
HOW-CUT
REC
VR808
VR807
VR806
VR801
VR805
VR804
VR803
VR802

3.3.1 VOL Ass'y, SP Ass'y, FRONT Ass'y and EXPAND Ass'y P.C. BOARDS CONNECTION DIAGRAM

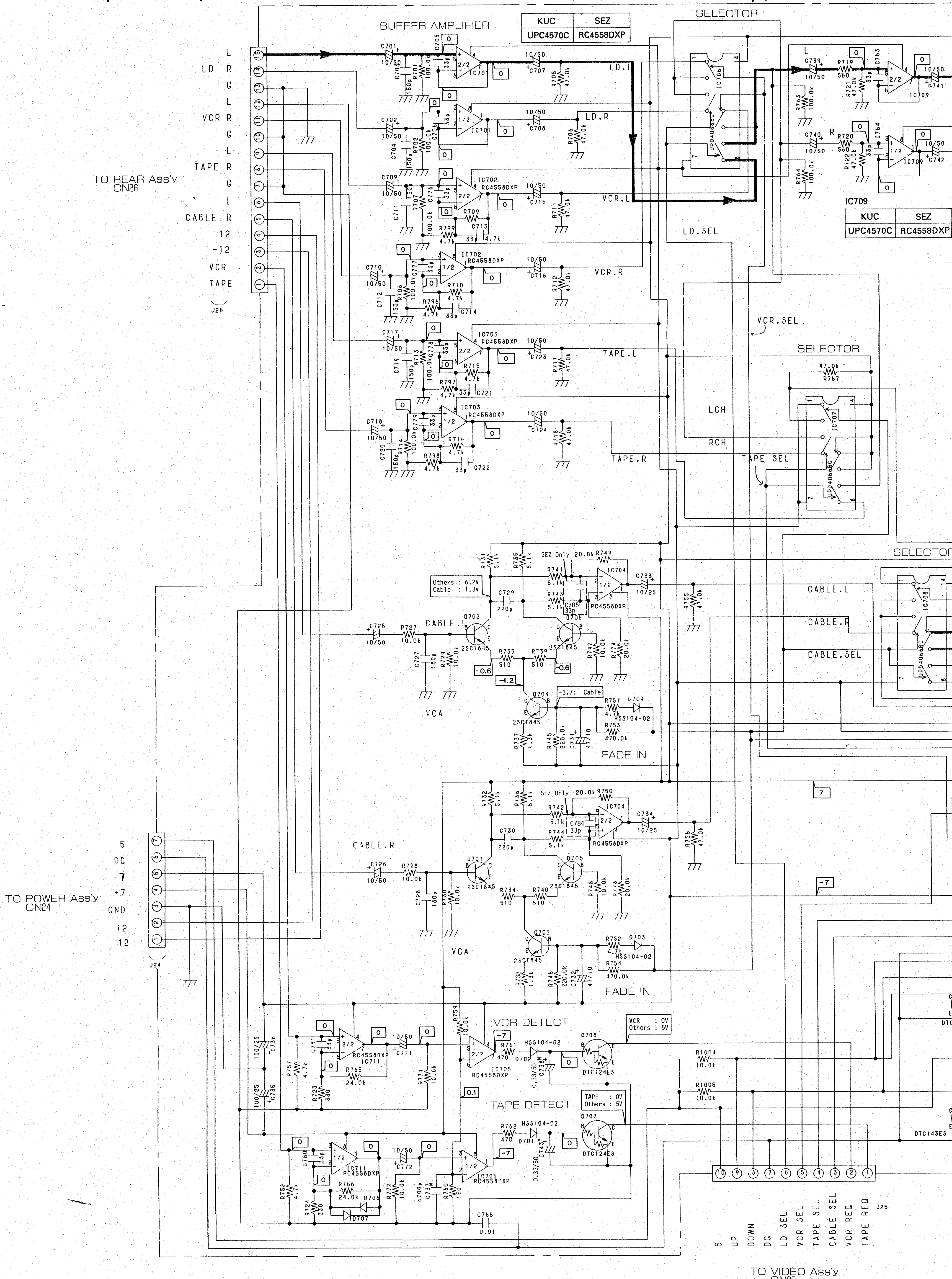

SP Ass'y (KUC: AWZ3460)
(SEZ: AWZ3970)
SP A
SP B
L CH +
R CH +
L CH −
R CH −
PANEL GND.
PIONEER
L CH
L GND
R GND
R CH
SP ASSY
AWZ 3460
3970
SP Terminal
C343
C344
C345
C346
SP Ass'y
Earth screw
MUSIC
SEZ Only
VOL Ass'y
(KUC: AWZ3457)
(SEZ: AWZ3958)
VR306
IC310
IC30
TO POWER Ass'y CN17,CN20,CN16
H
C
q
u
TO VIDEO Ass'y CN7
FRONT Ass'y (KUC: AWZ3454)
(SEZ: AWZ3957)
s
t
TO POWER
Ass'y H.M
STEREO MIXING AMPLIFIER
CN9
CN10
LD
VCR
TAPE
CABLE
EXPAND ASSY
AWZ 3455
J1
J2
MODEL SELECT
H.M
CABL SEL
TAPE SEL
VCR SEL
TAPE REQ
VCR REQ
LD REQ
ANP1508-B
COMPLEX ASSY
GND
ENKA
POPS
ROCK
NORMA
KEY
S820
L-M-H
MIC3 GAIN
BASS-MUSIC-TREBLE
BASS—MIC—TREBLE
BALANCE
REPEA
DELAY
REVERB
HOW-CUT
VR802
VR803 VR804
VR805
VR801
VR806
VR807
VR808
IC803 D831 D832
Q804
D854 D804
D833
Q803
D853 D803
D835
D836
Q802
D852 D802
D837 D838
Q801
D851 D801
D826 Q823 Q824
D809 Q809
Q808
D808
Q807
D807


5
6
7
8
9
A
B
C
D
E
F
MASTER
ECHO
MIC1
MIC2
MIC3
PIONEER
KUC: UPC4570C
SEZ: RC4558DXP
TA7291
TA7291S
ILLUM. POWER SUPLY
TO MIC Ass'y J1
I
TO SELECT Ass'y CN15
J
TO DSP Ass'y CN1, CN2 CN3, CN6
K
L
TO TONE Ass'y J9, J10, J11
VR304
VR305
VR301
VR302
VR303
Q301
Q303
Q305
Q306
IC307
IC309
IC304
IC305
D301
D302
Q304
Q302
IC301
IC306
IC302
D304
Q308
D303
u
w
EXPAND Ass'y
(AWZ3455)
PD0012
MODEL SELECT
J2
J1
AWZ 3454
AWZ 3957
FRONT ASSY
complex assy
MIC3 ECHO
b3
b2
b1
N
#1
#2
#3
#4
#5
HOW-CUT
REC
RTN
MEMORY
IC805
Q807
D807
Q806
D806
D822
D823
D821
Q805
D805
D845
Q820
IC804
Q810
D810
D844
Q811
D811
D843
D842
D841
Q812
D812
Q813
D813
Q814
D814
Q815

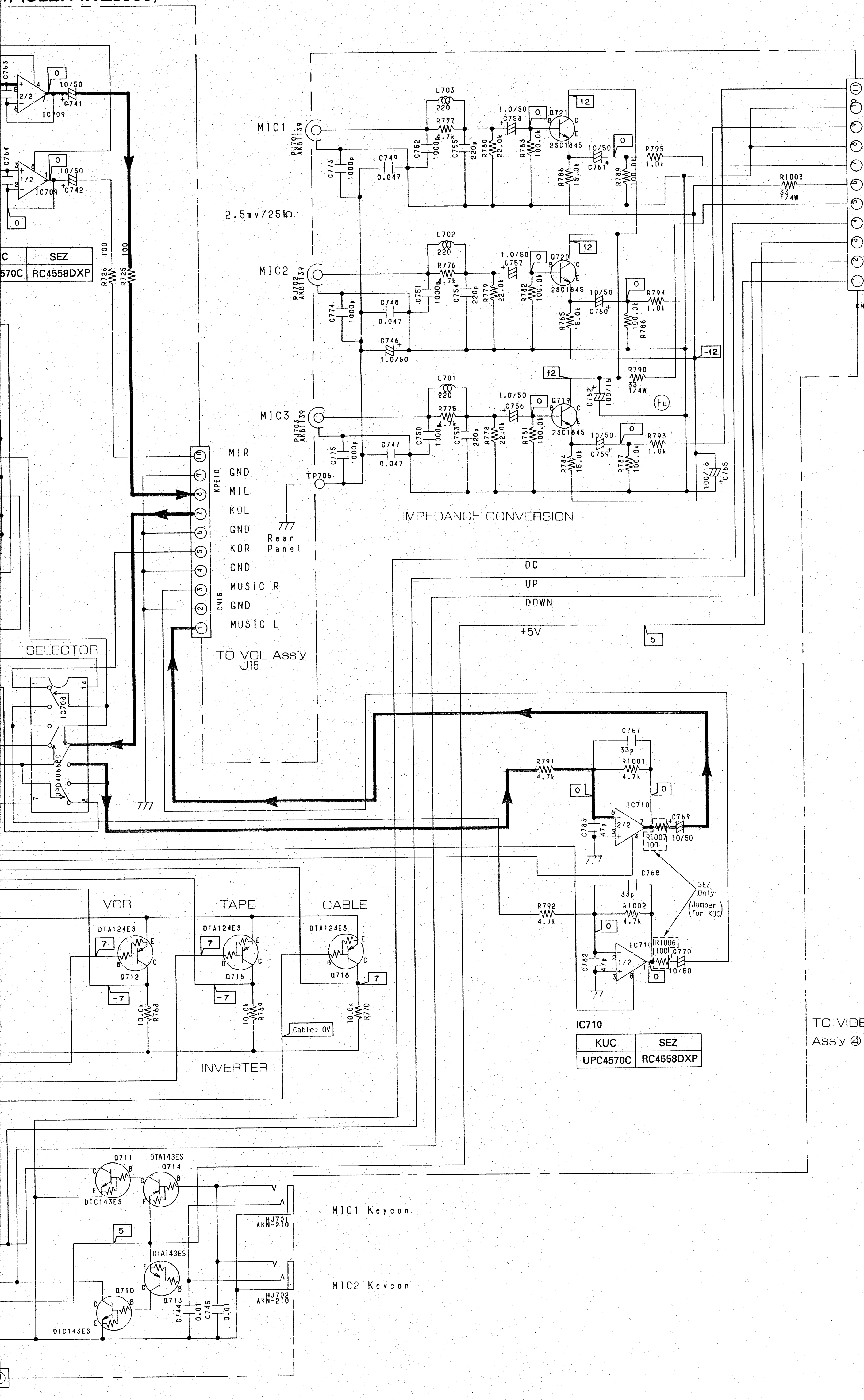
3.4 SELECT ASS'Y, FUSE ASS'Y AND REAR ASS'Y

3.4.1 SELECT Ass'y and FUSE Ass'y SCHEMATIC DIAGRAM

SELECT Ass'y (KUC: AWZ3461) (SEZ: AV


A
B
C
D
E
F
BUFFER AMPLIFIER
KUC
SEZ
UPC4570C
RC4558DXP
SELECTOR
TO REAR Ass'y
CN26
LD
VCR
TAPE
CABLE
L
R
G
12
-12
VCR
TAPE
J26
IC701
IC702
RC4558DXP
IC703
RC4558DXP
LD.L
LD.R
VCR.L
VCR.R
TAPE.L
TAPE.R
LD.SEL
VCR.SEL
TAPE SEL
LCH
RCH
IC706
UPD4066BC
IC707
IC708
IC709
KUC
SEZ
UPC4570C
RC4558DXP
SELECTOR
CABLE.L
CABLE.R
CABLE.SEL
SEZ Only
IC704
RC4558DXP
Others : 6.2V
Cable : 1.3V
Q702
Q704
Q706
2SC1845
-3.7: Cable
H5S104-02
VCA
FADE IN
CABLE.R
Q701
Q703
Q705
TO POWER Ass'y
CN24
5
DG
-7
+7
GND
-12
12
J24
VCR DETECT
TAPE DETECT
VCR : 0V
Others : 5V
TAPE : 0V
Others : 5V
IC705
RC4558DXP
IC711
RC4558DXP
Q707
Q708
DTC124ES
DTC143ES
D701
D702
D706
D707
C766
0.01
J25
5
UP
DOWN
DG
LD SEL
VCR SEL
TAPE SEL
CABLE SEL
VCR REQ
TAPE REQ
TO VIDEO Ass'y
CN25

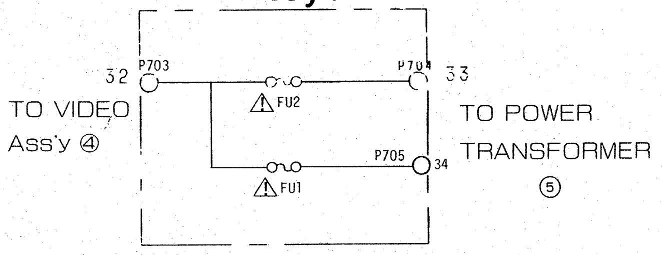
1) (SEZ: AWZ3959)


MIC1
MIC2
MIC3
PJ701 AKB1139
PJ702 AKB1139
PJ703 AKB1139
L701 220
L702 220
L703 220
R775 4.7k
R776 4.7k
R777 4.7k
1.0/50
C756
C757
C758
C747 0.047
C748 0.047
C749 0.047
C746 1.0/50
C773 1000p
C774 1000p
C775 1000p
Q719 2SC1845
Q720 2SC1845
Q721 2SC1845
10/50
C759
C760
C761
R793 1.0k
R794 1.0k
R795 1.0k
R1003 33 1/4W
R790 33 1/4W
C762 100/16
C765 100/16
Fu
12
-12
2.5mv/25kΩ
TP706
Rear Panel
IMPEDANCE CONVERSION
CN13
MIC3
GND
MIC2
GND
MIC1
-12V
+12V
DG
+5V
DOWN
UP
TO MIC Ass'y J13
CN15 KPE10
MIR
GND
MIL
KOL
GND
KOR
GND
MUSIC R
GND
MUSIC L
TO VOL Ass'y J15
DG
UP
DOWN
+5V
5
IC709
10/50
C741
C742
C763
C764
R724 100
R725 100
SELECTOR
IC708 μPD4066BC
IC710
C767 33p
R791 4.7k
R1001 4.7k
C769 10/50
R1007 100
C783 47p
C768 33p
R792 4.7k
R1002 4.7k
R1006 100
C770 10/50
C782 47p
SEZ Only (Jumper for KUC)
VCR
TAPE
CABLE
DTA124ES
Q712
Q716
Q718
7
-7
R768 10.0k
R769 10.0k
R770 10.0k
Cable: 0V
INVERTER
Q711 DTC143ES
Q714 DTA143ES
Q713 DTA143ES
Q710 DTC143ES
C744 0.01
C745 0.01
HJ701 AKN-210
HJ702 AKN-210
MIC1 Keycon
MIC2 Keycon
J25

IC710

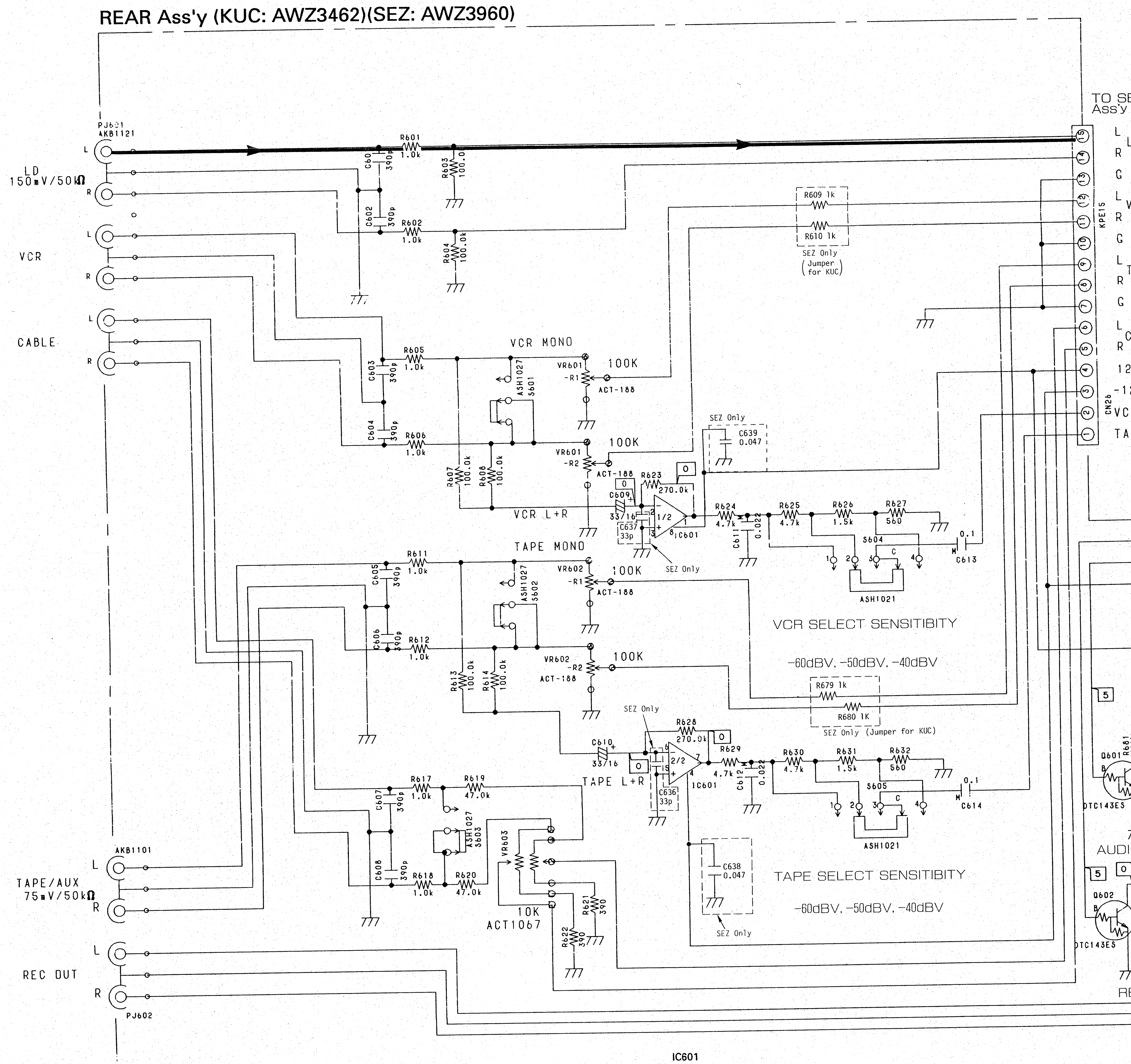
KUC	SEZ
UPC4570C	RC4558DXP

FUSE Ass'y(AWZ3463)


32
P703
P704
33
FU2
FU1
P705
34
TO VIDEO Ass'y ④
TO POWER TRANSFORMER ⑤

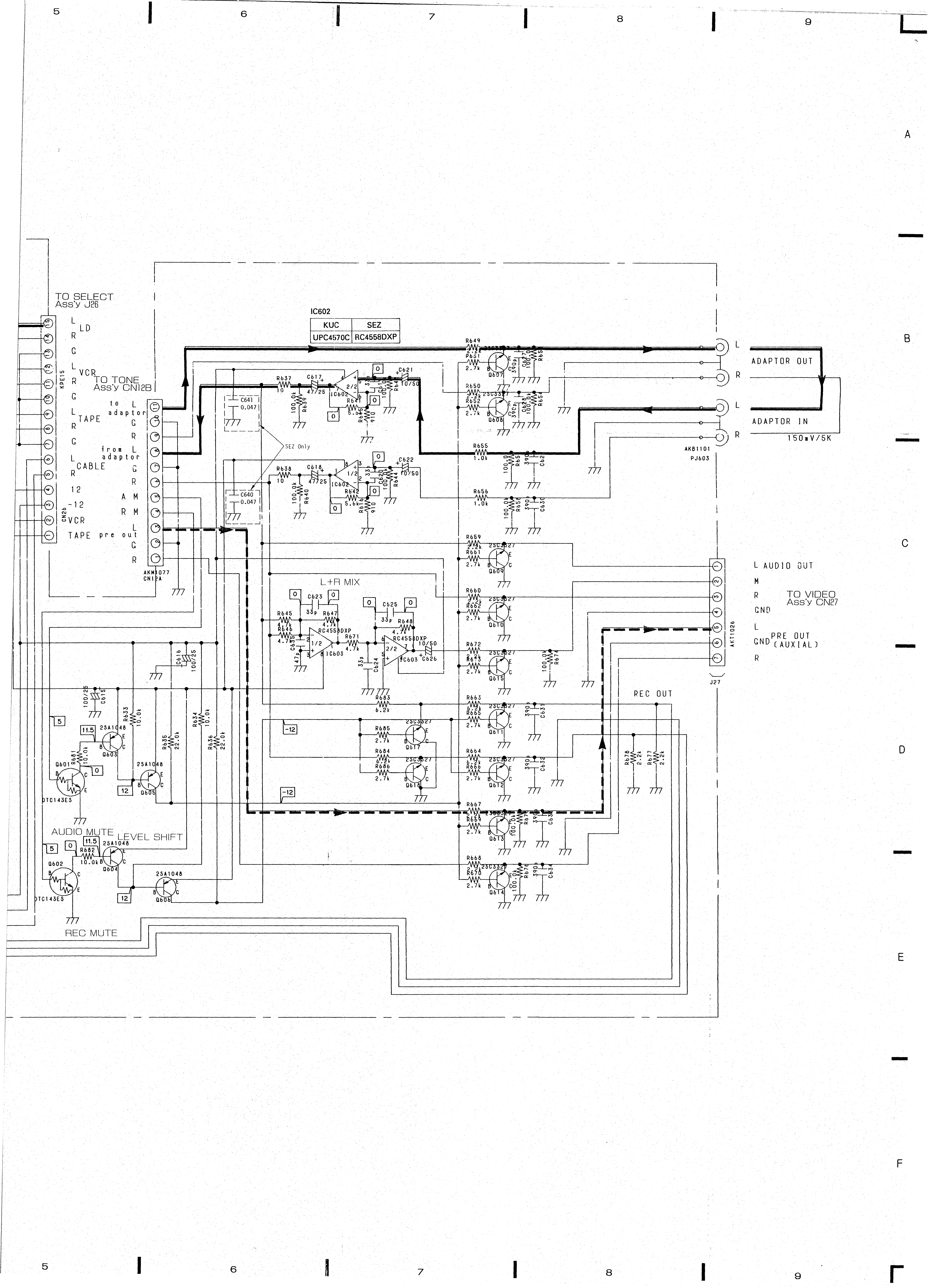
	KUC	SEZ
FU1	NONE	AEK-514 (T4A/250V)
FU2	AEK1002 (8A/125V)	AEK-514 (T4A/250V)

3.4.2 REAR Ass'y SCHEMATIC DIAGRAM

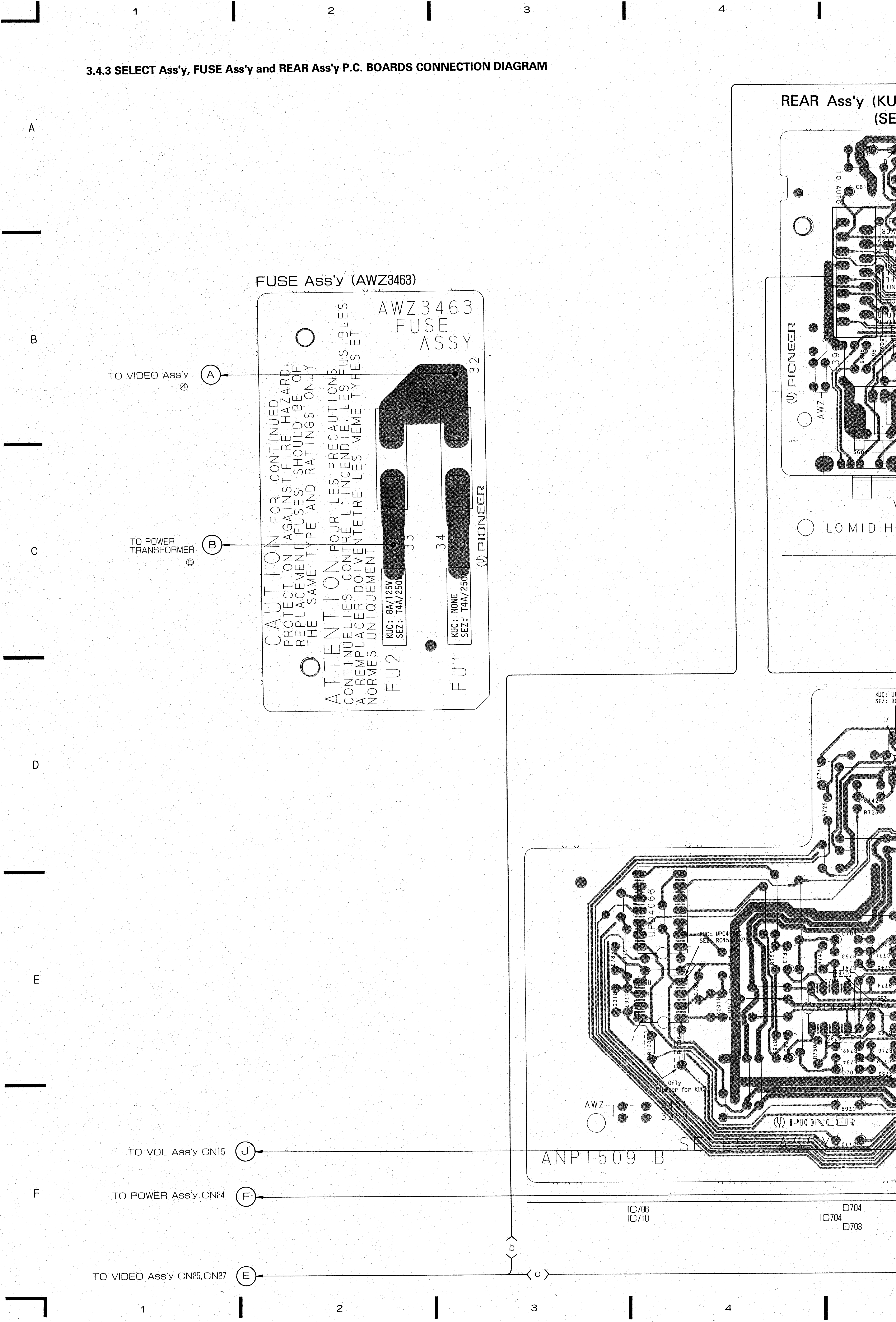

REAR Ass'y (KUC: AWZ3462)(SEZ: AWZ3960)
PJ601
AKB1121
LD
150mV/50kΩ
VCR
CABLE
TAPE/AUX
75mV/50kΩ
AKB1101
REC OUT
PJ602
R601 1.0k
R602 1.0k
R603 100.0k
R604 100.0k
C601 390p
C602 390p
R605 1.0k
R606 1.0k
C603 390p
C604 390p
R607 100.0k
R608 100.0k
VCR MONO
ASH1027 S601
VR601-R1 100K
VR601-R2 100K
ACT-188
R609 1k
R610 1k
SEZ Only (Jumper for KUC)
SEZ Only
C639 0.047
R623 270.0k
C609 33/16
C637 33p
IC601 1/2
VCR L+R
R624 4.7k
C611 0.022
R625 4.7k
R626 1.5k
R627 560
S604
ASH1021
C613 0.1
VCR SELECT SENSITIBITY
-60dBV, -50dBV, -40dBV
TAPE MONO
R611 1.0k
R612 1.0k
C605 390p
C606 390p
ASH1027 S602
VR602-R1 100K
VR602-R2 100K
R613 100.0k
R614 100.0k
R679 1k
R680 1K
SEZ Only (Jumper for KUC)
R628 270.0k
C610 33/16
C636 33p
IC601 2/2
TAPE L+R
R629 4.7k
C612 0.022
R630 4.7k
R631 1.5k
R632 560
S605
ASH1021
C614 0.1
C638 0.047
TAPE SELECT SENSITIBITY
-60dBV, -50dBV, -40dBV
R617 1.0k
R619 47.0k
R618 1.0k
R620 47.0k
C607 390p
C608 390p
ASH1027 S603
VR603 10K ACT1067
R621 390
R622 390
TO SE
Ass'y
KPE15
CN26
Q601
DTC143ES
Q602
DTC143ES
AUDI

IC601	
KUC	SEZ
RC4558DXP	M5238PF

: Signal route
(To select the input LD, the VIDEO signal input is also needed.)

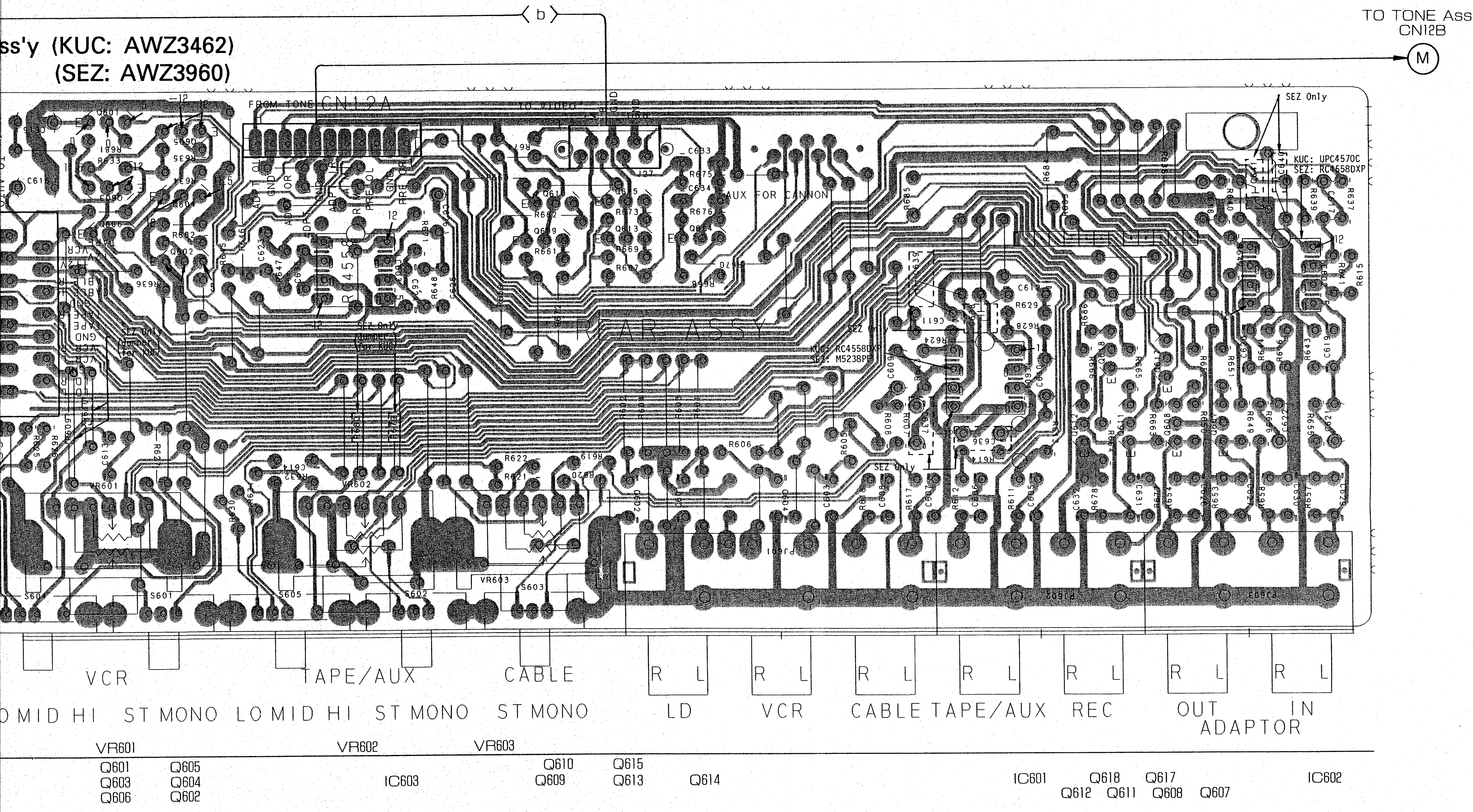

5
6
7
8
9
A
B
C
D
E
F
TO SELECT Ass'y J26
KPE15
CN26
LD
VCR
TAPE
CABLE
12
-12
VCR TAPE pre out
TO TONE Ass'y CN12B
to adaptor
from adaptor
AKM1077 CN12A
L
R
G
AM
RM
IC602
KUC
SEZ
UPC4570C
RC4558DXP
SEZ Only
C641 0.047
C640 0.047
R637 10
R638 10
C617 47/25
C618 47/25
IC602 2/2
IC602 1/2
R639 100.0k
R640 100.0k
R641 5.6k
R642 5.6k
R643 910
R644 910
C621 10/50
C622 10/50
C619
C620
R649 2.2k
R651 2.7k
R650 2.2k
R652 2.7k
Q607
Q608
2SC3327
390p
C627
C628
R653 100.0k
R654 100.0k
R655 1.0k
R656 1.0k
ADAPTOR OUT
ADAPTOR IN
150mV/5K
AKB1101 PJ603
L+R MIX
C623 33p
C625 33p
R645 4.7k
R646 4.7k
R647 4.7k
R648 4.7k
C635 47p
RC4558DXP
IC603 1/2
IC603 2/2
R671 4.7k
C624 33p
C626 10/50
R659 2.2k
R661 2.7k
Q609
R660 2.2k
R662 2.7k
Q610
R672 2.2k
R673 2.7k
Q615
R674 100.0k
L AUDIO OUT
M
R
GND
L
GND PRE OUT (AUXIAL)
R
TO VIDEO Ass'y CN27
AKT1026
J27
REC OUT
R683 6.2k
R685 2.7k
R684 6.2k
R686 2.7k
Q617
Q618
R663 6.2k
R665 2.7k
Q611
C631 390p
R664 6.2k
R666 2.7k
Q612
C632 390p
R678 2.2k
R677 2.2k
R667 2.2k
R669 2.7k
Q613
R675 100.0k
C633 390p
R668 2.2k
R670 2.7k
Q614
R676 100.0k
C634 390p
C616 100/25
C615 100/25
R633 10.0k
R634 10.0k
R635 22.0k
R636 22.0k
2SA1048
Q603
Q605
Q604
Q606
R681 10.0k
R682 10.0k
Q601
Q602
DTC143ES
11.5
12
5
0
-12
AUDIO MUTE
LEVEL SHIFT
REC MUTE

3.4.3 SELECT Ass'y, FUSE Ass'y and REAR Ass'y P.C. BOARDS CONNECTION DIAGRAM

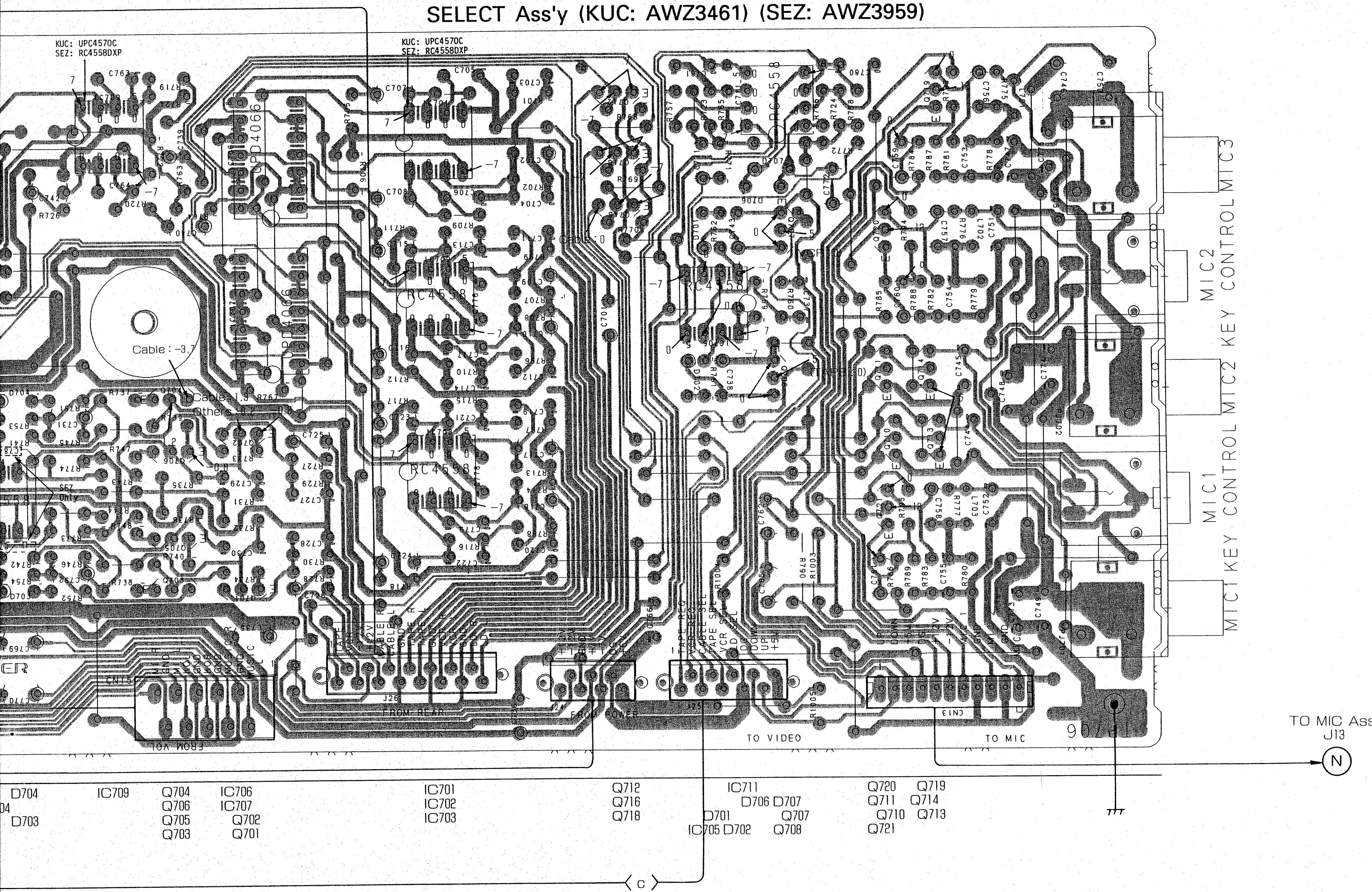

1
2
3
4
A
B
C
D
E
F
REAR Ass'y (KU
(SE
TO AUTO
C618
PIONEER
AWZ
39
S604
LO MID H
FUSE Ass'y (AWZ3463)
AWZ3463
FUSE
ASSY
CAUTION FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY
ATTENTION POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE, LES FUSIBLES A REMPLACER DOIVENT ETRE LES MEME TYPES ET NORMES UNIQUEMENT
32
33
34
KUC: 8A/125V
SEZ: T4A/250V
KUC: NONE
SEZ: T4A/250V
FU2
FU1
PIONEER
TO VIDEO Ass'y
④
A
TO POWER TRANSFORMER
⑤
B
KUC: UP
SEZ: RC
C741
R725
R726
C742
UPD4066
KUC: UPC4570C
SEZ: RC4558DXP
RC4558
D704
D703
R753
R755
R749
R750
R754
R752
R742
R746
C731
C733
C783
R1001
R1002
SEZ Only
Jumper for KUC
AWZ
3161
3959
PIONEER
SELECT ASS'Y
ANP1509-B
TO VOL Ass'y CN15
J
TO POWER Ass'y CN24
F
TO VIDEO Ass'y CN25,CN27
E
IC708
IC710
IC704
D704
D703
b
c

Pioneer 3582

ss'y (KUC: AWZ3462)
(SEZ: AWZ3960)


(b)
TO TONE Ass
CN12B
(M)
FROM TONE CN12A
TO VIDEO
AUX FOR CANNON
REAR ASSY
SEZ Only
KUC: UPC4570C
SEZ: RC4558DXP
KUC: RC4558DXP
SEZ: M5238P
VR601
VR602
VR603
S601
S602
S603
S605
VCR
TAPE/AUX
CABLE
R L
LO MID HI
ST MONO
LD
VCR
CABLE
TAPE/AUX
REC
OUT
IN
ADAPTOR
VR601
VR602
VR603
Q601 Q605
Q603 Q604
Q606 Q602
IC603
Q610 Q615
Q609 Q613
Q614
IC601
Q618 Q617
Q612 Q611 Q608 Q607
IC602

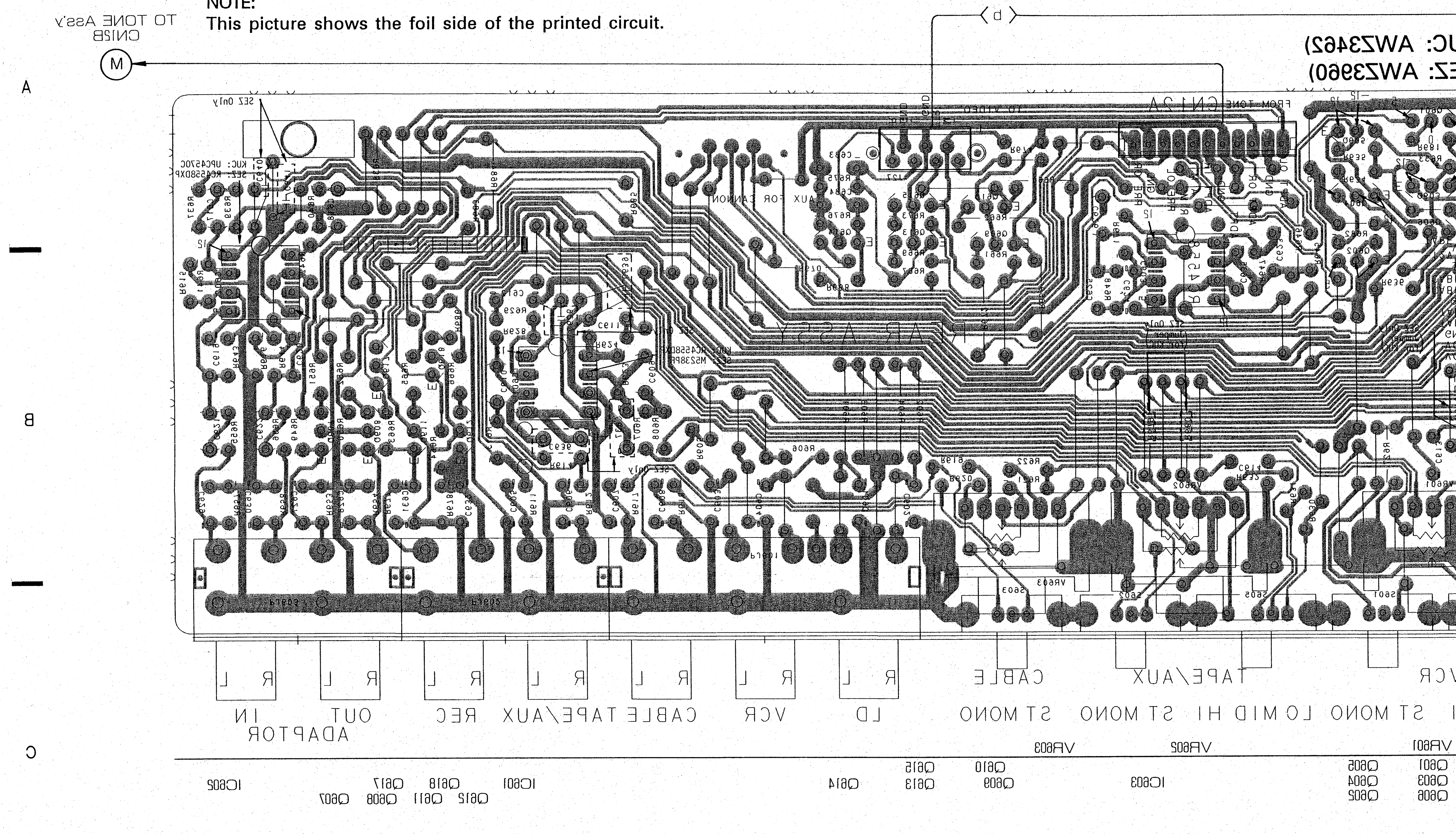
SELECT Ass'y (KUC: AWZ3461) (SEZ: AWZ3959)


KUC: UPC4570C
SEZ: RC4558DXP
KUC: UPC4570C
SEZ: RC4558DXP
PD4066
RC4558
RC4558
RC4558
RC4558
Cable : -3.7
Cable : 1.5
Others : 0.2
Cable : 0
SEZ Only
J26
FROM REAR
FROM POWER
FROM VOL
TO VIDEO
TO MIC
CN13
MIC3
MIC2 KEY CONTROL
MIC2
MIC1 KEY CONTROL
MIC1
TO MIC Ass
J13
(N)
D704
D703
IC709
Q704
Q706
Q705
Q703
IC706
IC707
Q702
Q701
IC701
IC702
IC703
Q712
Q716
Q718
IC711
D706 D707
D701
IC705 D702
Q707
Q708
Q720 Q719
Q711 Q714
Q710 Q713
Q721
(c)

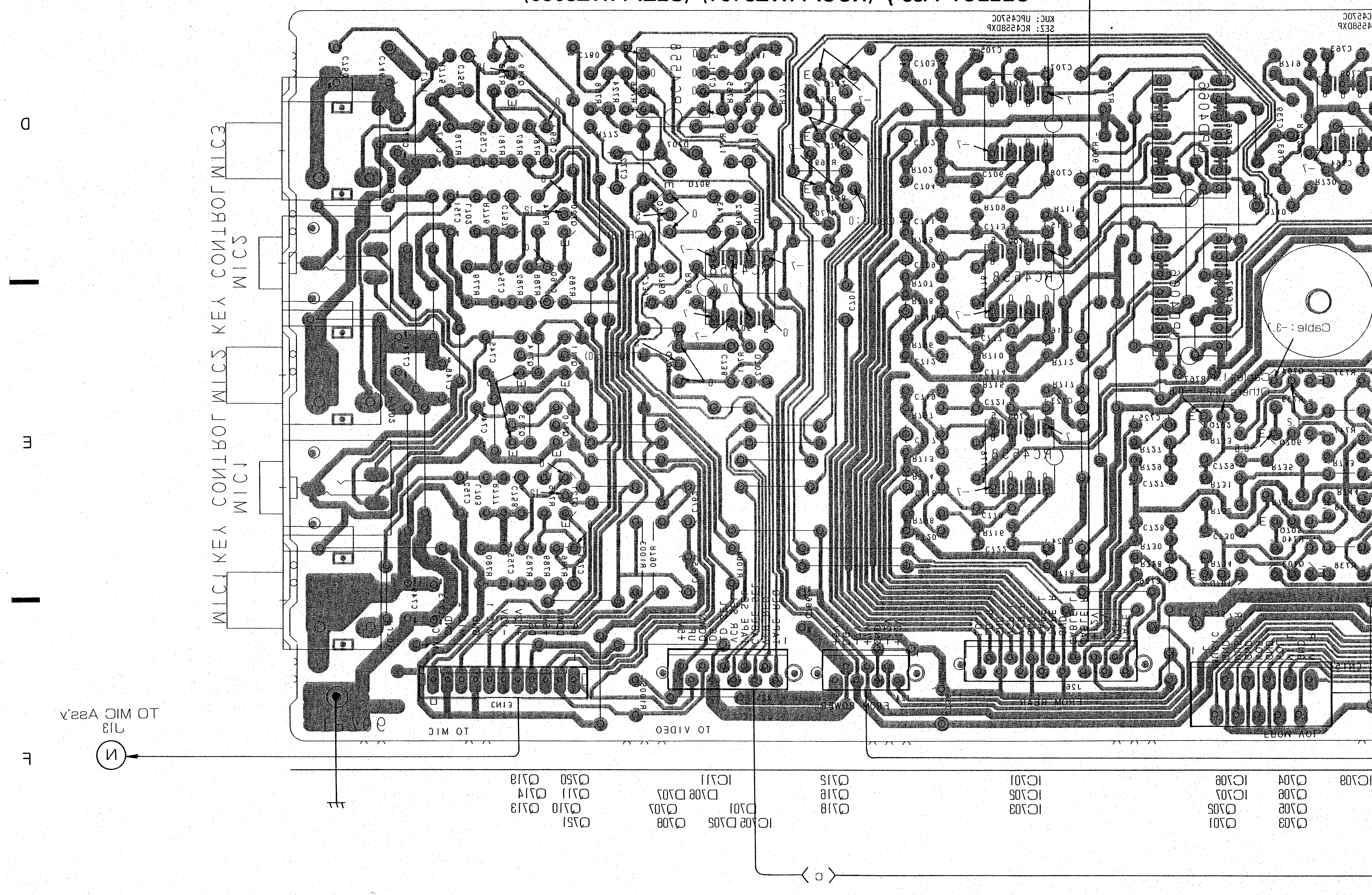
NOTE:
This picture shows the foil side of the printed circuit.

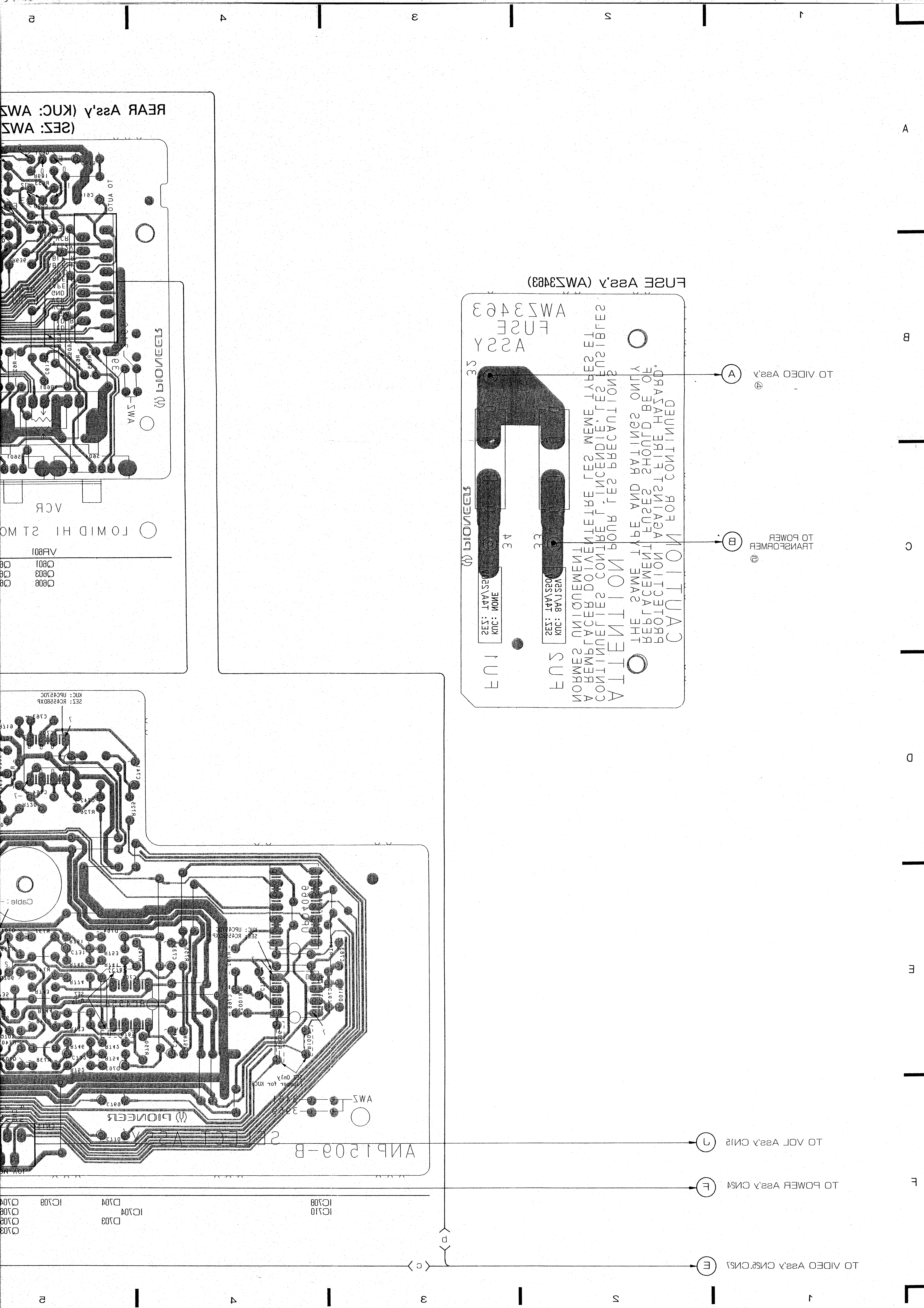
TO TONE Ass'y
CN12B

UC: AWZ3462)
EZ: AWZ3960)


M
b
A
B
C
8
7
6
5
SEZ Only
KUC: UPC4570C
SEZ: RC4558DXP
REAR Ass'y
FROM TONE CN12A
TO VIDEO
AUX FOR CANNON
IN
ADAPTOR
OUT
REC
TAPE/AUX
CABLE
VCR
LD
R
L
CABLE
TAPE/AUX
VCR
ST MONO
LO MID HI
VR603
VR602
VR601
IC802
Q617
Q618
IC801
Q614
Q615
Q610
Q613
Q609
IC603
Q605
Q601
Q604
Q603
Q602
Q606
Q607
Q608
Q611
Q612

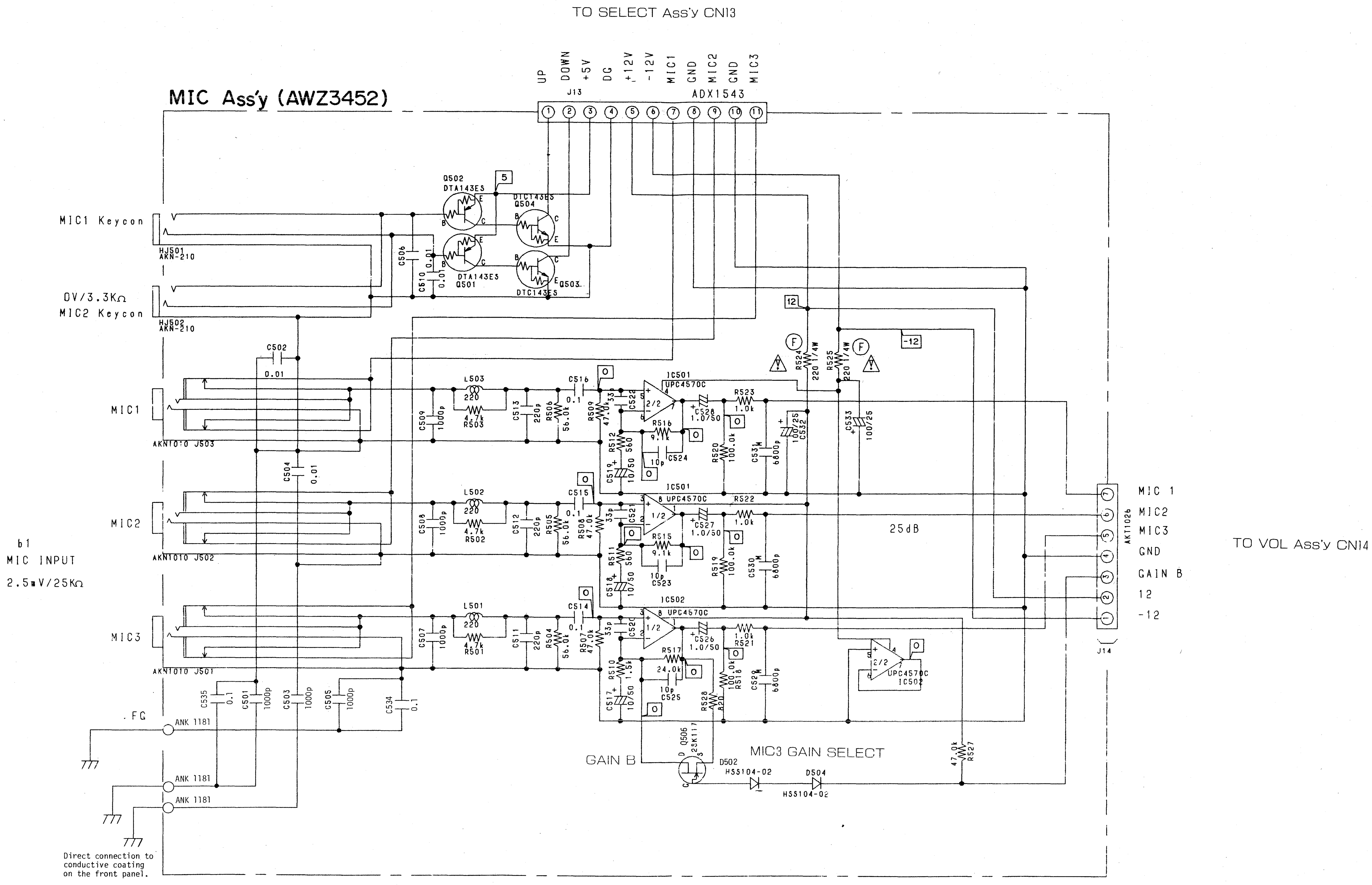
SELECT Ass'y (KUC: AWZ3461) (SEZ: AWZ3959)


D
E
F
MIC1 KEY CONTROL MIC1
MIC2 KEY CONTROL MIC2
MIC3
KUC: UPC4570C
SEZ: RC4558DXP
BC4558
Cable : -3.7
CN13
TO MIC
TO VIDEO
FROM POWER
FROM REAR
FROM TONE
TO MIC Ass'y
J13
N
c
Q719
Q720
Q714
Q711
Q713
Q710
Q721
IC711
D706
D707
Q707
Q708
Q701
IC705
D702
Q712
Q716
Q718
IC701
IC702
IC703
IC706
IC707
Q702
Q701
Q704
Q706
Q705
Q703
IC709
9
8
7
6
5


REAR Ass'y (KUC: AWZ
(SEZ: AWZ
FUSE Ass'y (AWZ3463)
AWZ3463
FUSE
ASSY
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY.
ATTENTION
A REMPLACER OBLIGATOIREMENT CONTINUER LA PROTECTION CONTRE L'INCENDIE, LES FUSIBLES NORMES DE REMPLACEMENT DOIVENT ETRE LES MEME TYPES ET
FU1
SEZ: T4A/250V
KUC: NONE
FU2
SEZ: T4A/250V
KUC: 8A/125V
PIONEER
A
TO VIDEO Ass'y ④
B
TO POWER TRANSFORMER ⑮
VCR
LO MID HI ST MO
VR601
Q601 Q603 Q606
ANP1509-B
SELECT Ass'y
PIONEER
J
TO VOL Ass'y CN15
F
TO POWER Ass'y CN24
E
TO VIDEO Ass'y CN25,CN27
IC709 IC704 D704 D703 IC708 IC710
Q704 Q706 Q708 Q703
KUC: UPC4570C
SEZ: RC4558DXP
SEZ Only
Jumper for KUC
Cable
AWZ
1 2 3 4 5
A B C D E F

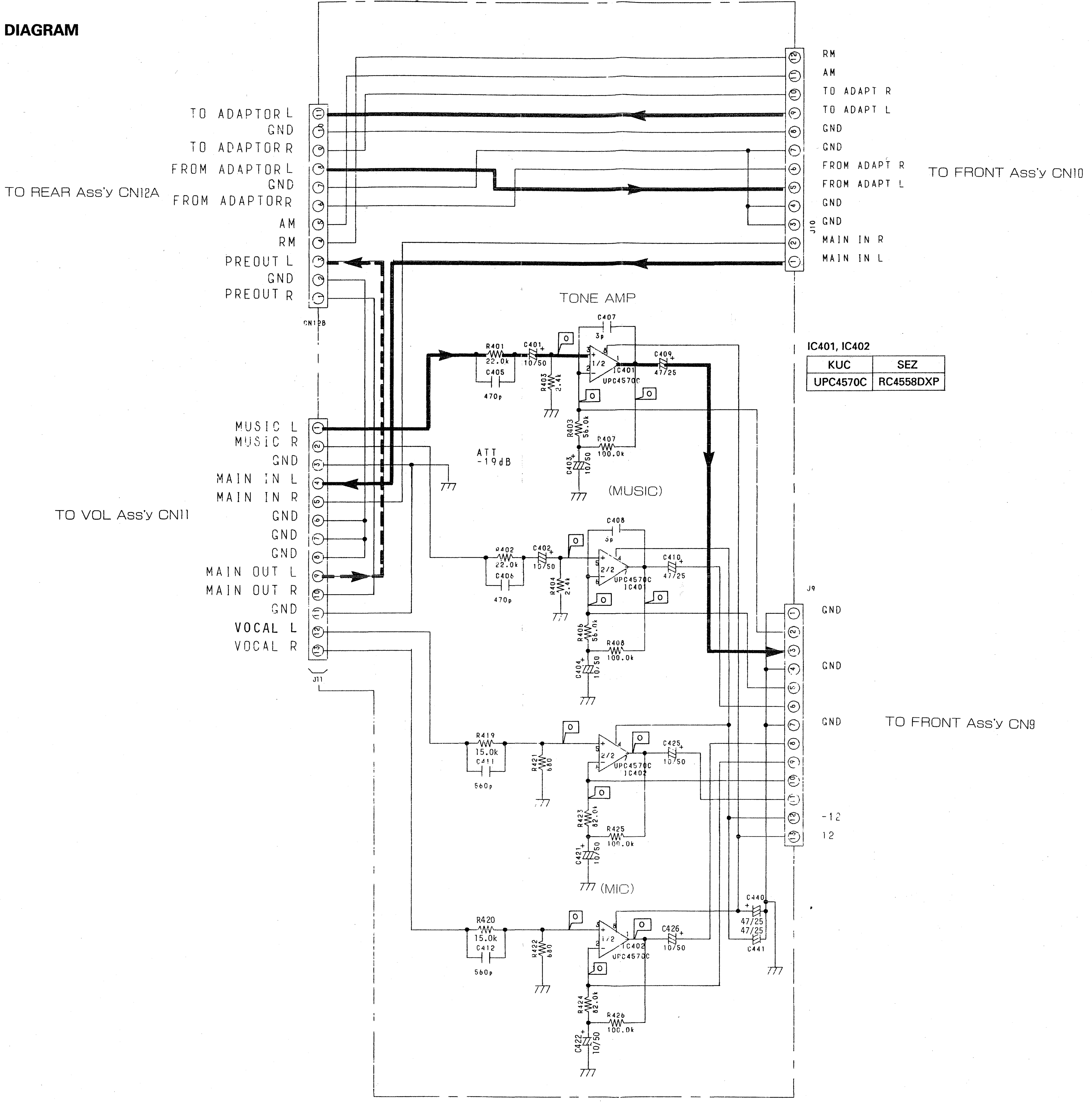
3.5 MIC ASS'Y AND TONE ASS'Y

3.5.1 MIC Ass'y SCHEMATIC DIAGRAM


TO SELECT Ass'y CN13
UP
DOWN
+5V
DG
+12V
-12V
MIC1
GND
MIC2
GND
MIC3
J13
ADX1543
MIC Ass'y (AWZ3452)
Q502
DTA143ES
Q504
DTC143ES
DTA143ES
Q501
DTC143ES
Q503
5
MIC1 Keycon
HJ501
AKN-210
0V/3.3KΩ
MIC2 Keycon
HJ502
AKN-210
C506
0.01
C610
0.01
C502
0.01
12
-12
R524
220 1/4W
R525
220 1/4W
MIC1
AKN1010 J503
L503
220
4.7k
R503
C509
1000p
C513
220p
R506
56.0k
C516
0.1
R509
47.0k
33p
C522
IC501
UPC4570C
2/2
R523
1.0k
C528
1.0/50
R516
9.1k
R512
560
C519
10/50
10p
C524
R520
100.0k
C531
6800p
C532
100/25
C533
100/25
C504
0.01
MIC2
AKN1010 J502
L502
220
4.7k
R502
C508
1000p
C512
220p
R505
56.0k
C515
0.1
R508
47.0k
33p
C521
IC501
UPC4570C
1/2
R522
1.0k
C527
1.0/50
R515
9.1k
R511
560
C518
10/50
10p
C523
R519
100.0k
C530
6800p
25dB
b1
MIC INPUT
2.5mV/25KΩ
MIC3
AKN1010 J501
L501
220
4.7k
R501
C507
1000p
C511
220p
R504
56.0k
C514
0.1
R507
47.0k
33p
C520
IC502
UPC4570C
1/2
R521
1.0k
C526
1.0/50
R517
24.0k
R510
1.5k
C517
10/50
10p
C525
R518
100.0k
R528
820
C529
6800p
UPC4570C
IC502
2/2
C535
0.1
C501
1000p
C503
1000p
C505
1000p
C534
0.1
FG
ANK 1181
ANK 1181
ANK 1181
Direct connection to conductive coating on the front panel.
GAIN B
Q506
2SK117
D
S
G
D502
HSS104-02
D504
HSS104-02
MIC3 GAIN SELECT
47.0k
R527
MIC 1
MIC2
MIC3
GND
GAIN B
12
-12
AKT1026
J14
TO VOL Ass'y CN14
F
F

3.5.2 TONE Ass'y SCHEMATIC DIAGRAM

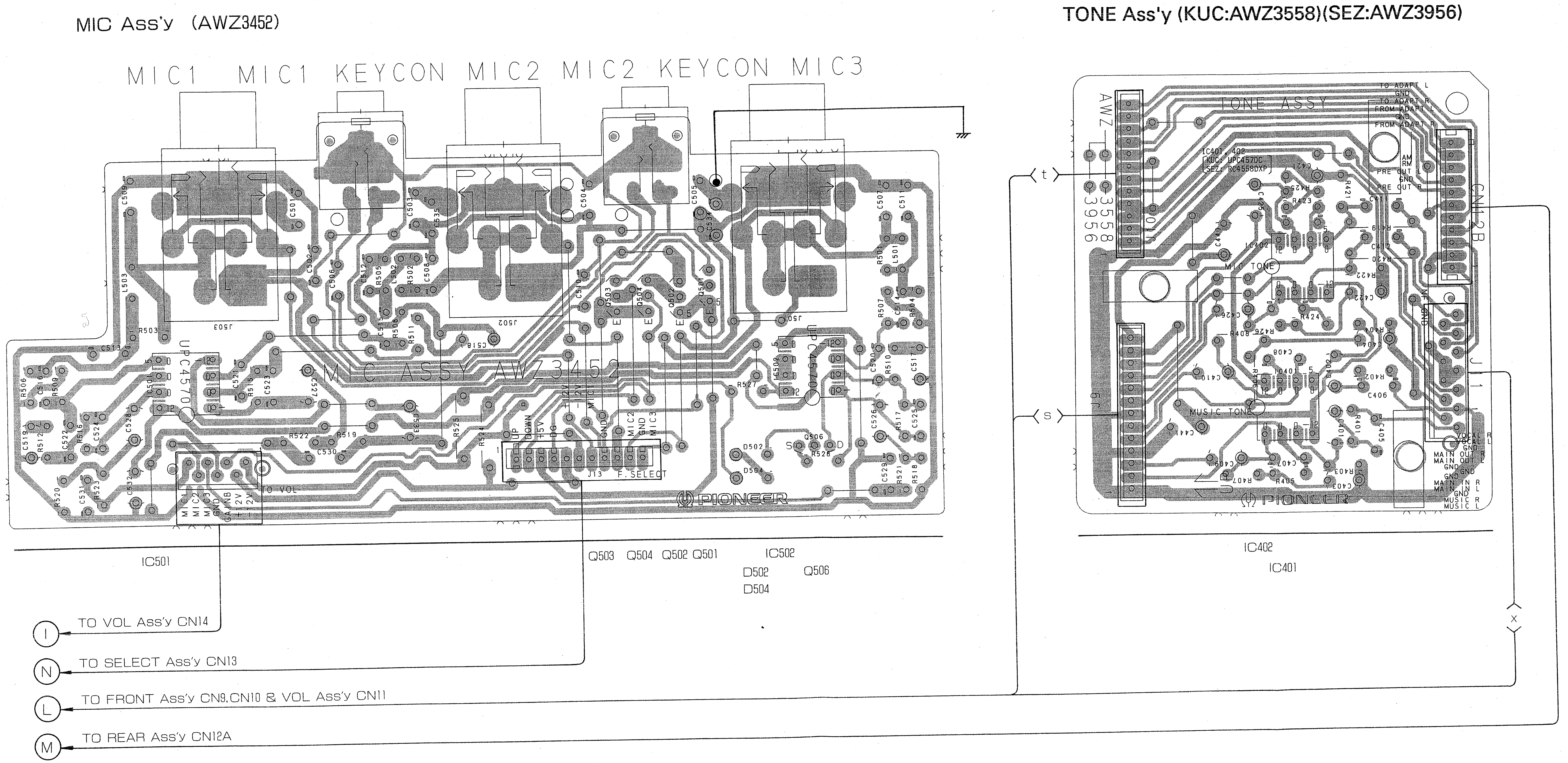
TONE Ass'y (KUC:AWZ3558)(SEZ:AWZ3956)


TO REAR Ass'y CN12A
TO ADAPTOR L
GND
TO ADAPTOR R
FROM ADAPTOR L
GND
FROM ADAPTOR R
AM
RM
PREOUT L
GND
PREOUT R
CN12B
RM
AM
TO ADAPT R
TO ADAPT L
GND
GND
FROM ADAPT R
FROM ADAPT L
GND
GND
MAIN IN R
MAIN IN L
J10
TO FRONT Ass'y CN10
TONE AMP
C407
3p
R401
22.0k
C401
10/50
C405
470p
R403
2.4k
1/2
IC401
UPC4570C
C409
47/25
R403
56.0k
R407
100.0k
C403
10/50
ATT
-19dB
(MUSIC)
TO VOL Ass'y CN11
MUSIC L
MUSIC R
GND
MAIN IN L
MAIN IN R
GND
GND
GND
MAIN OUT L
MAIN OUT R
GND
VOCAL L
VOCAL R
J11
C408
3p
R402
22.0k
C402
10/50
C406
470p
R404
2.4k
2/2
UPC4570C
IC401
C410
47/25
R406
56.0k
R408
100.0k
C404
10/50
J9
GND
GND
GND
-12
12
TO FRONT Ass'y CN9
R419
15.0k
C411
560p
R421
680
2/2
UPC4570C
IC402
C425
10/50
R423
82.0k
R425
100.0k
C421
10/50
(MIC)
R420
15.0k
C412
560p
R422
680
1/2
IC402
UPC4570C
C426
10/50
R424
82.0k
R426
100.0k
C422
10/50
C440
47/25
47/25
C441

IC401, IC402

KUC	SEZ
UPC4570C	RC4558DXP

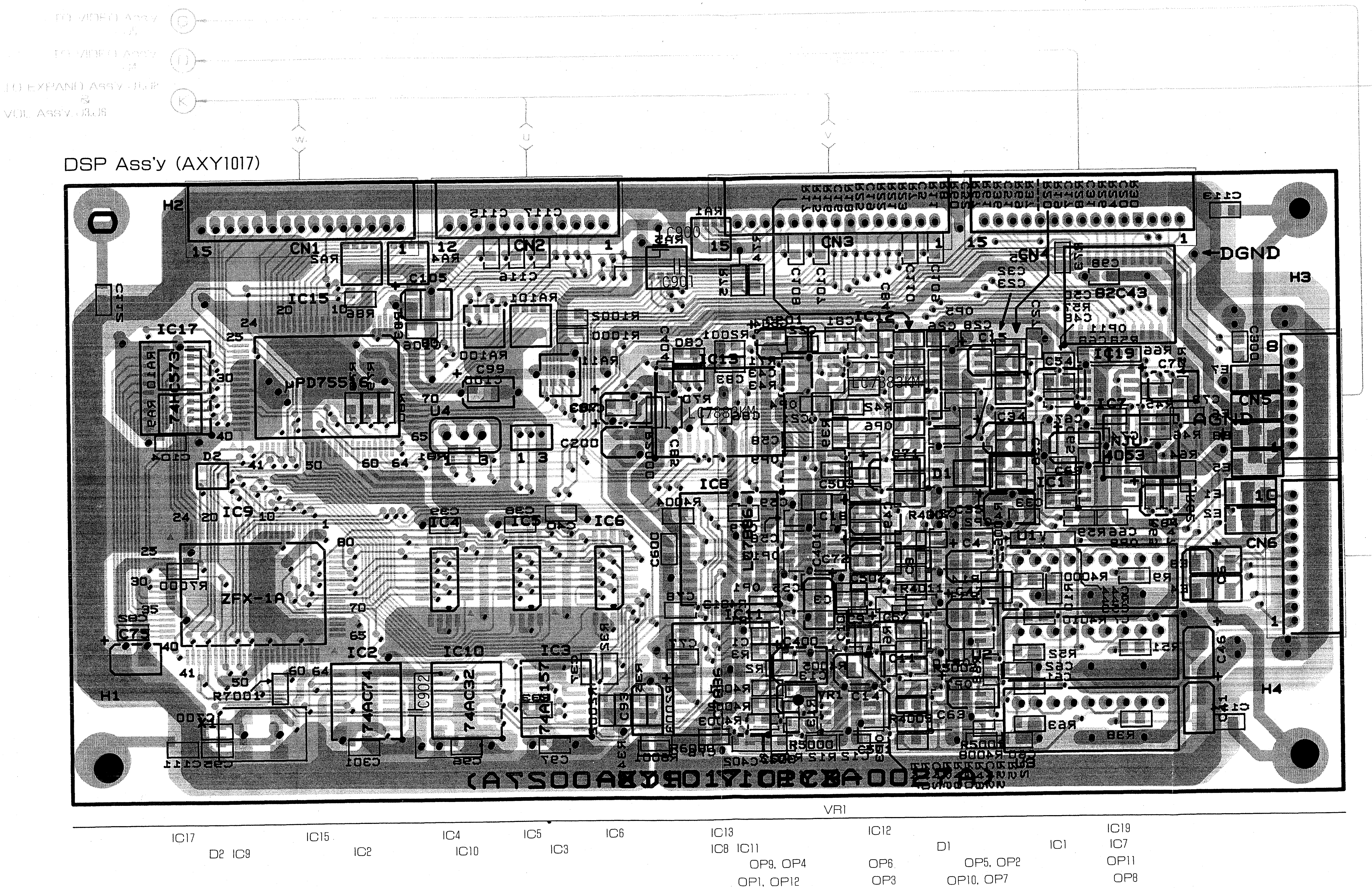
2.5.3 MIC Ass'y and TONE Ass'y P.C. BOARDS CONNECTION DIAGRAM


MIC Ass'y (AWZ3452)
TONE Ass'y (KUC:AWZ3558)(SEZ:AWZ3956)
MIC1
MIC1
KEYCON
MIC2
MIC2
KEYCON
MIC3
J503
J502
J501
UPC4570
MIC ASSY AWZ3452
J13 F.SELECT
TO VOL
PIONEER
IC501
Q503 Q504 Q502 Q501
IC502
D502
D504
Q506
TONE ASSY
AWZ-3558
3956
IC401, 402
KUC: UPC4570C
SEZ: RC4558DXP
MIC TONE
MUSIC TONE
CN12B
J11
TO ADAPT L
TO ADAPT R
FROM ADAPT L
FROM ADAPT R
PRE OUT L
PRE OUT R
VOCAL R
VOCAL L
MAIN OUT R
MAIN OUT L
MAIN IN R
MAIN IN L
MUSIC R
MUSIC L
PIONEER
IC402
IC401
t
s
x
I
TO VOL Ass'y CN14
N
TO SELECT Ass'y CN13
L
TO FRONT Ass'y CN9,CN10 & VOL Ass'y CN11
M
TO REAR Ass'y CN12A

3.6 DSP ASS'Y (AXY1017)

3.6.1 DSP Ass'y P.C. BOARD CONNECTION DIAGRAM

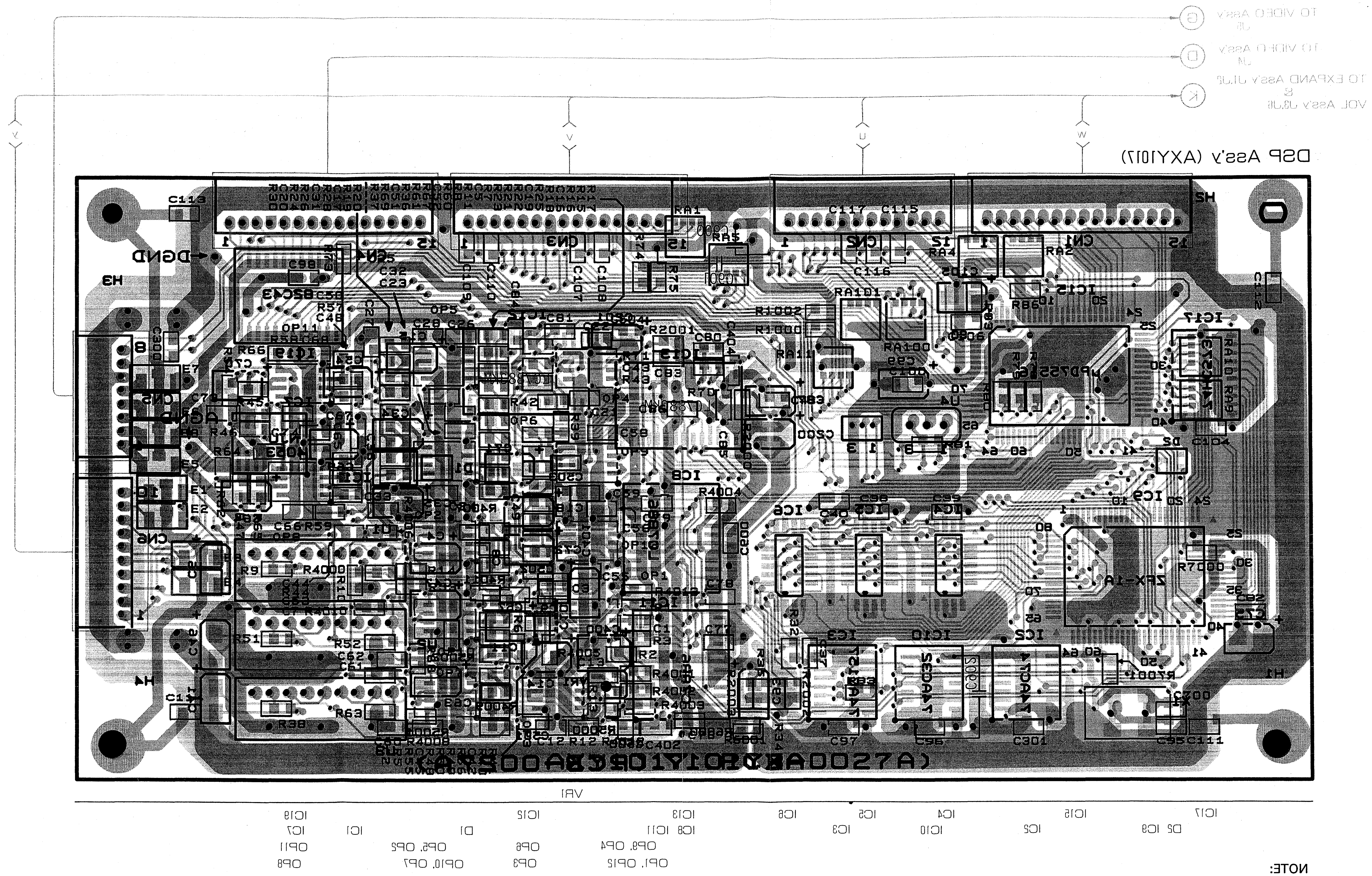
NOTE:
This picture shows the right side of the mounting connector.


TO VIDEO Ass'y
G
TO VIDEO Ass'y
H
TO EXPAND Ass'y
&
VOL Ass'y
K
W
U
V
Y
DSP Ass'y (AXY1017)
H2
CN1
CN2
CN3
CN4
CN5
CN6
DGND
AGND
H1
H3
H4
IC17
IC15
IC9
IC2
IC10
IC3
IC4
IC5
IC6
IC8
IC12
IC13
IC19
IC7
IC1
μPD75516
74HC573
ZFX-1A
74AC74
74AC32
74AC157
NJU4053
L7805KM
L7883KM
U4
D1
D2
X1
VR1
(A7S00AXY01Y1OBCBA002YA)
VR1
IC17
D2 IC9
IC15
IC2
IC4
IC10
IC5
IC3
IC6
IC13
IC8 IC11
OP9, OP4
OP1, OP12
IC12
OP6
OP3
D1
OP5, OP2
OP10, OP7
IC1
IC19
IC7
OP11
OP8

NOTE:
●,· : Through-hole marks on each P.C. Board

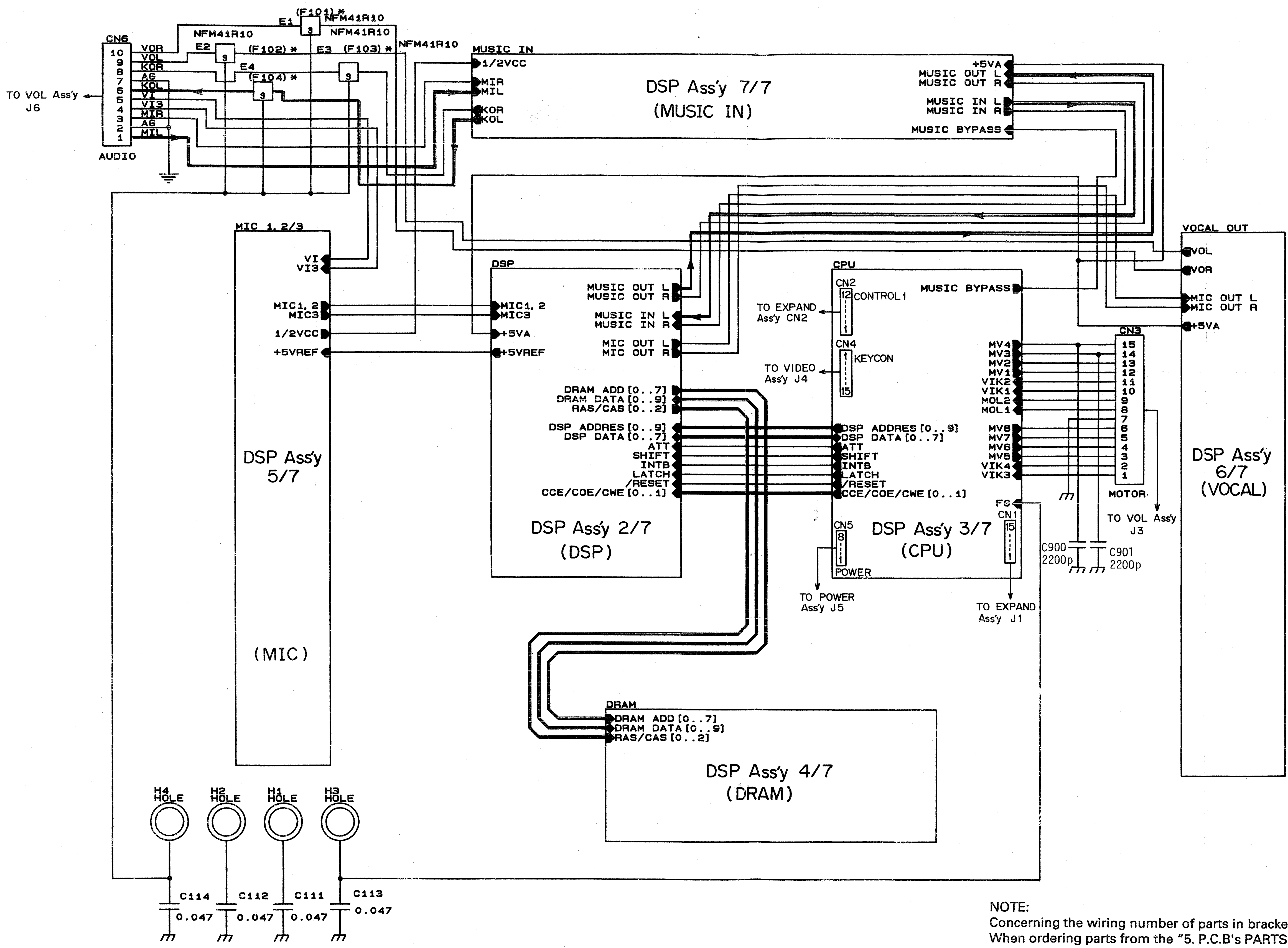
NOTE:
This picture shows the reverse side of the mounting connector.

DSP Ass'y (AXY1017)


TO VIDEO Ass'y J6
TO VIDEO Ass'y J4
TO EXPAND Ass'y J1,J2 & VOL Ass'y J3,J6
G
D
K
V
U
W
DGND
AGND
CN1
CN2
CN3
CN4
CN5
CN6
H1
H2
H3
H4
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC15
IC17
IC19
D1
D2
VR1
OP1, OP12
OP3
OP10, OP7
OP8
OP9, OP4
OP6
OP5, OP2
OP11
ZFX-1A
μPD2556

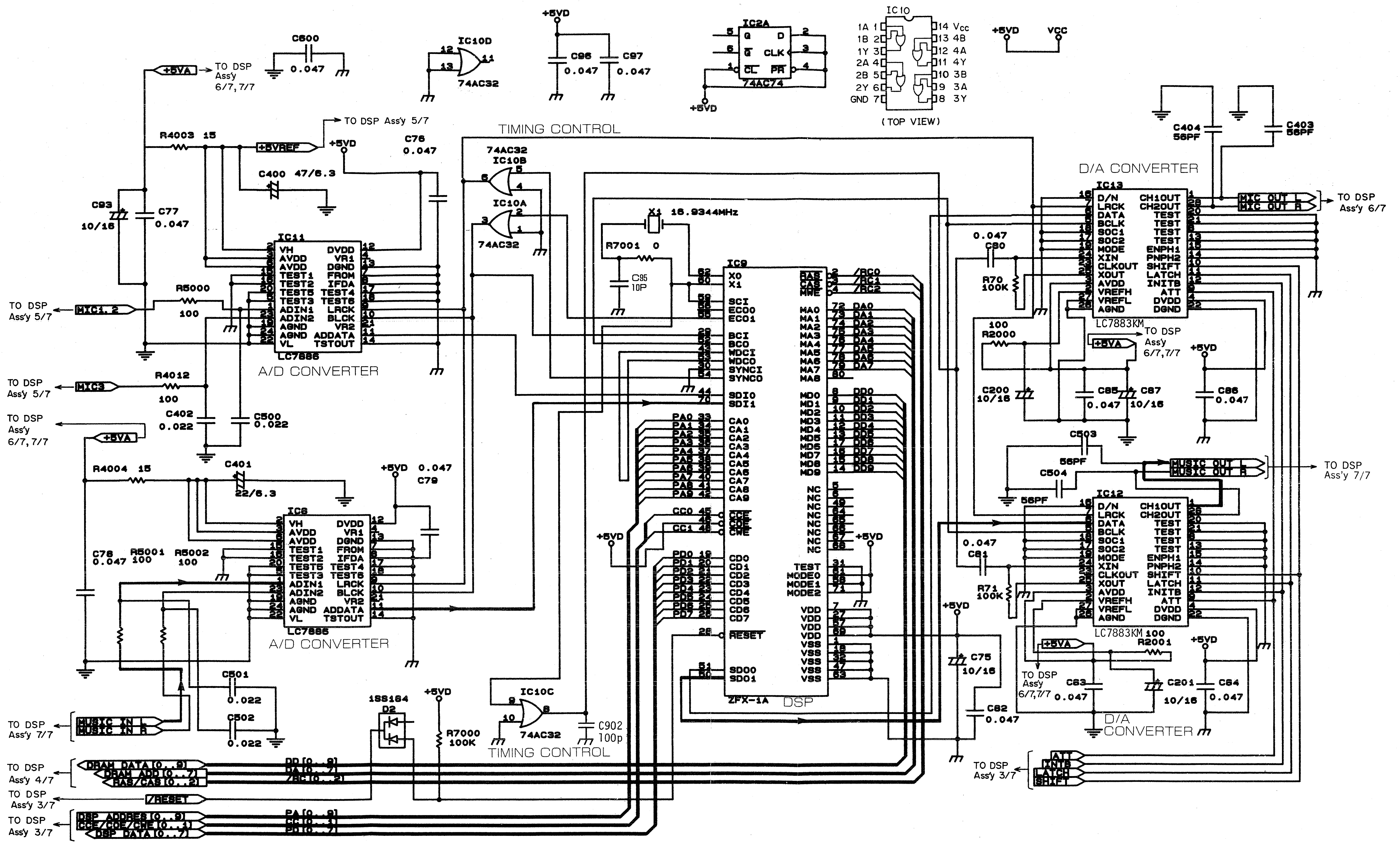
NOTE:
•: Through-hole marks on each P.C. Board

3.6.2 DSP Ass'y SCHEMATIC DIAGRAM (1/7)

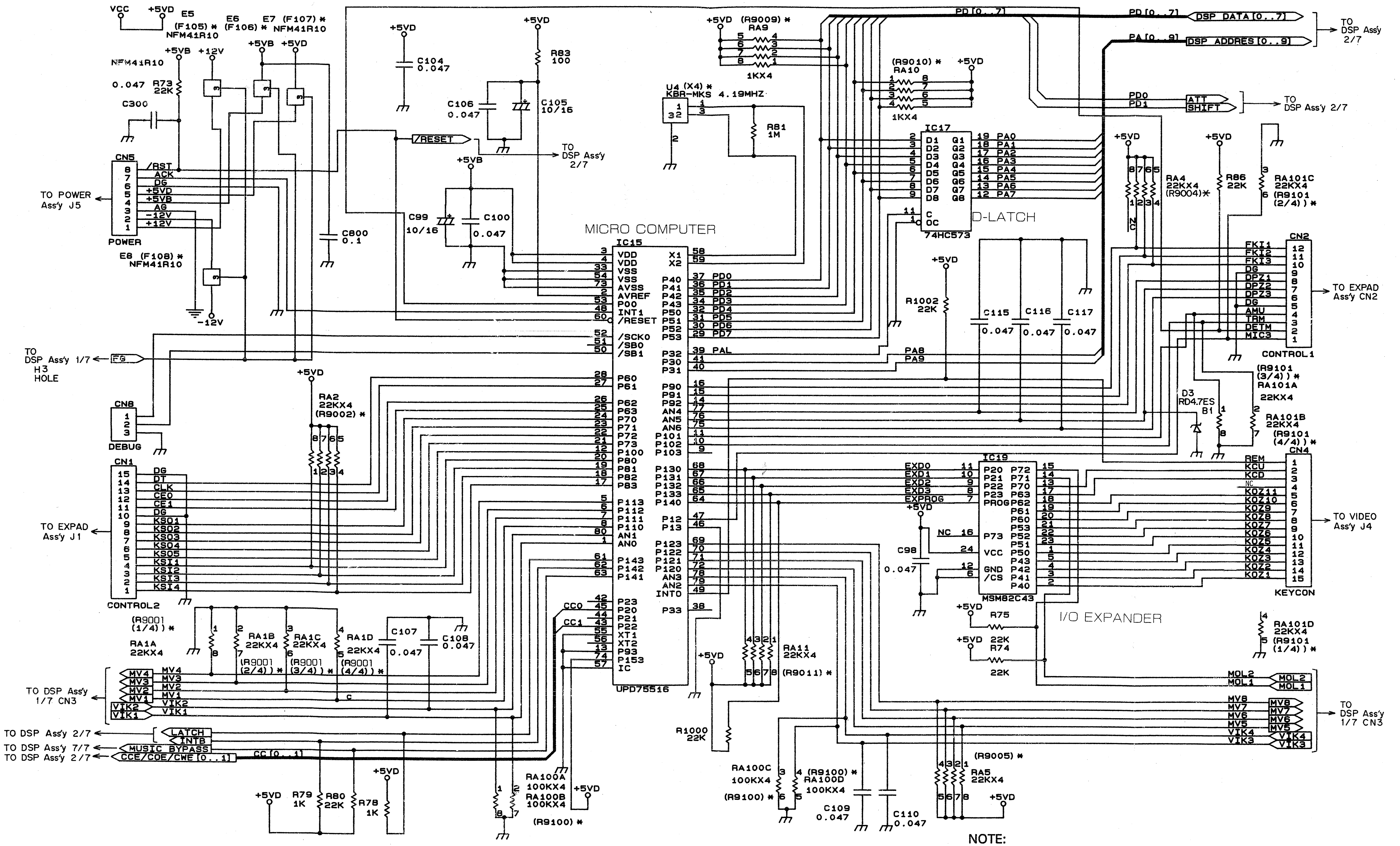

A
B
C
D
CN6
10 VOR
9 VOL
8 KOR
7 AG
6 KOL
5 VI
4 VI3
3 MIR
2 AG
1 MIL
AUDIO
TO VOL Ass'y J6
E1 (F101) * NFM41R10
E2 NFM41R10 (F102) *
E3 (F103) * NFM41R10
E4 (F104) * NFM41R10
NFM41R10
MUSIC IN
1/2VCC
MIR
MIL
KOR
KOL
DSP Ass'y 7/7 (MUSIC IN)
+5VA
MUSIC OUT L
MUSIC OUT R
MUSIC IN L
MUSIC IN R
MUSIC BYPASS
MIC 1, 2/3
VI
VI3
MIC1, 2
MIC3
1/2VCC
+5VREF
DSP Ass'y 5/7 (MIC)
DSP
MIC1, 2
MIC3
+5VA
+5VREF
MUSIC OUT L
MUSIC OUT R
MUSIC IN L
MUSIC IN R
MIC OUT L
MIC OUT R
DRAM ADD [0..7]
DRAM DATA [0..9]
RAS/CAS [0..2]
DSP ADDRES [0..9]
DSP DATA [0..7]
ATT
SHIFT
INTB
LATCH
/RESET
CCE/COE/CWE [0..1]
DSP Ass'y 2/7 (DSP)
CPU
CN2 12 1 CONTROL1
TO EXPAND Ass'y CN2
CN4 1 15 KEYCON
TO VIDEO Ass'y J4
MUSIC BYPASS
MV4
MV3
MV2
MV1
VIK2
VIK1
MOL2
MOL1
DSP ADDRES [0..9]
DSP DATA [0..7]
ATT
SHIFT
INTB
LATCH
/RESET
CCE/COE/CWE [0..1]
MV8
MV7
MV6
MV5
VIK4
VIK3
FG
CN1 15 1
CN5 8 1 POWER
DSP Ass'y 3/7 (CPU)
TO POWER Ass'y J5
TO EXPAND Ass'y J1
CN3 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
MOTOR
TO VOL Ass'y J3
C900 2200p
C901 2200p
VOCAL OUT
VOL
VOR
MIC OUT L
MIC OUT R
+5VA
DSP Ass'y 6/7 (VOCAL)
DRAM
DRAM ADD [0..7]
DRAM DATA [0..9]
RAS/CAS [0..2]
DSP Ass'y 4/7 (DRAM)
H4 HOLE
H2 HOLE
H1 HOLE
H3 HOLE
C114 0.047
C112 0.047
C111 0.047
C113 0.047

NOTE:
Concerning the wiring number of parts in brackets and parentheses ()*.
When ordering parts from the "5. P.C.B's PARTS LIST", use the wiring number in parentheses.

3.6.3 DSP Ass'y SCHEMATIC DIAGRAM (2/7)

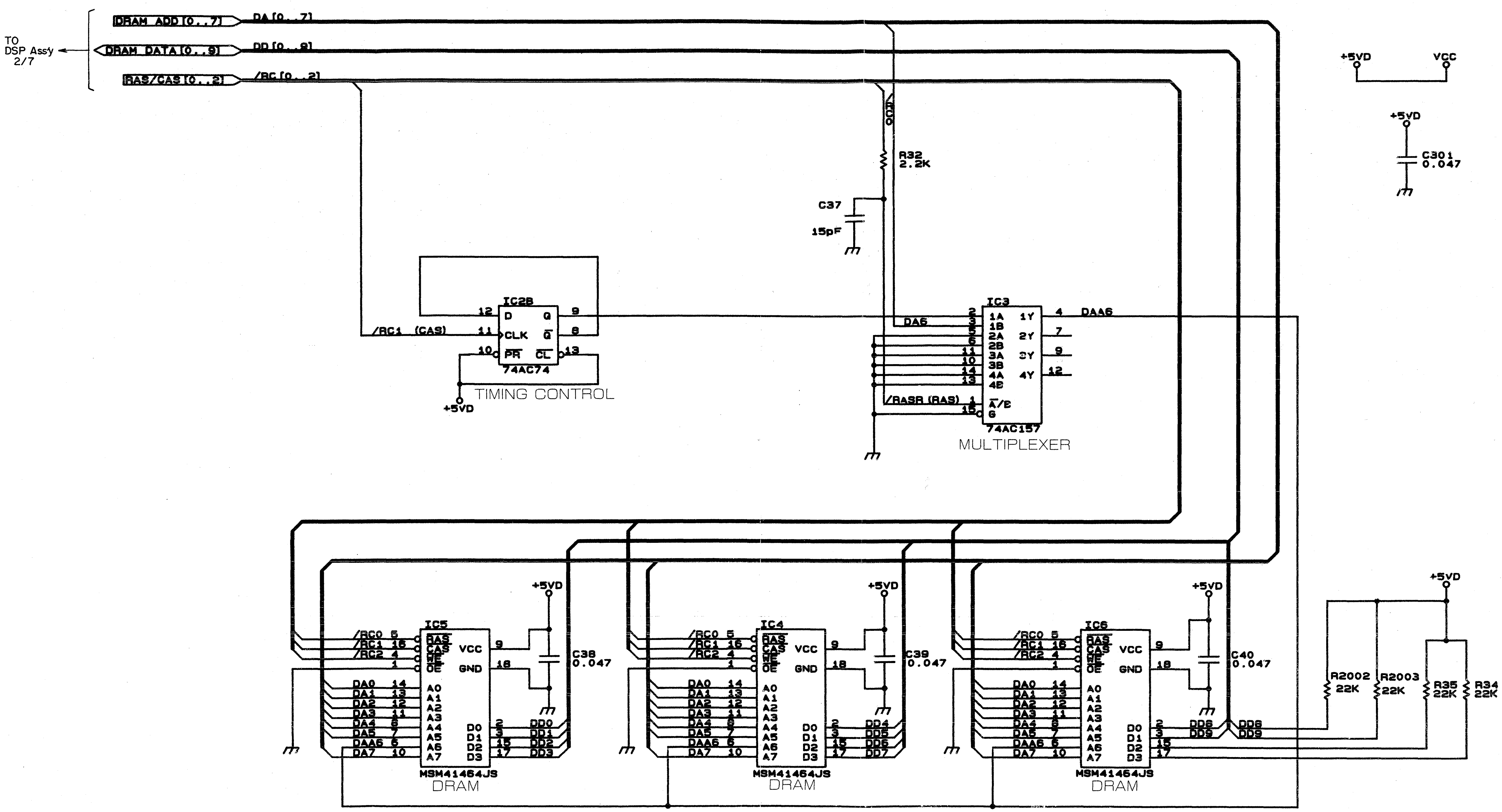

TIMING CONTROL
A/D CONVERTER
D/A CONVERTER
DSP
IC11
LC7866
IC8
LC7866
IC9
ZFX-1A
IC13
LC7883KM
IC12
LC7883KM
IC10D
74AC32
IC10B
IC10A
IC10C
IC2A
74AC74
IC10
(TOP VIEW)
1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7
14 Vcc
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y
X1 16.9344MHz
R7001 0
C95 10P
1SS184
D2
R7000 100K
C902 100p
+5VD
+5VA
+5VREF
VCC
C600 0.047
C96 0.047
C97 0.047
C76 0.047
C400 47/6.3
C93 10/16
C77 0.047
R4003 15
R5000 100
R4012 100
C402 0.022
C500 0.022
R4004 15
C401 22/6.3
C79 0.047
C78 0.047
R5001 100
R5002 100
C501 0.022
C502 0.022
C404 56PF
C403 56PF
C80 0.047
R70 100K
R2000 100
C200 10/16
C85 0.047
C87 10/16
C86 0.047
C503 56PF
C504 56PF
C81 0.047
R71 100K
C75 10/16
C82 0.047
C83 0.047
R2001 100
C201 10/16
C84 0.047
MIC1, 2
MIC3
MIC OUT L
MIC OUT R
MUSIC OUT L
MUSIC OUT R
MUSIC IN L
MUSIC IN R
DRAM DATA [0..9]
DRAM ADD [0..7]
RAS/CAS [0..2]
/RESET
DSP ADDRESS [0..9]
CCE/CDE/CRE [0..1]
DSP DATA [0..7]
DD [0..9]
DA [0..7]
/RC [0..2]
PA [0..9]
PC [0..1]
PD [0..7]
ATT
INTB
LATCH
SHIFT
TO DSP Ass'y 5/7
TO DSP Ass'y 6/7, 7/7
TO DSP Ass'y 6/7
TO DSP Ass'y 7/7
TO DSP Ass'y 4/7
TO DSP Ass'y 3/7
VH
AVDD
TEST1
TEST2
TEST5
TEST3
ADIN1
ADIN2
AGND
VL
DVDD
VR1
DGND
FROM
IFDA
TEST4
TEST6
LRCK
BLCK
VR2
ADDATA
TSTOUT
X0
X1
SCI
ECO0
ECO1
BCI
BCO
WDCI
WDCO
SYNCI
SYNCO
SDI0
SDI1
CA0
CA1
CA2
CA3
CA4
CA5
CA6
CA7
CA8
CA9
CCE
CDE
CRE
CD0
CD1
CD2
CD3
CD4
CD5
CD6
CD7
RESET
SDO0
SDO1
RAS
CAS
MWE
MA0
MA1
MA2
MA3
MA4
MA5
MA6
MA7
MA8
MD0
MD1
MD2
MD3
MD4
MD5
MD6
MD7
MD8
MD9
NC
TEST
MODE0
MODE1
MODE2
VDD
VSS
D/N
LRCK
DATA
BCLK
SOC1
SOC2
MODE
XIN
CLKOUT
XOUT
AVDD
VREFH
VREFL
AGND
CH1OUT
CH2OUT
TEST
ENPH1
PNPH2
SHIFT
LATCH
INITB
ATT
DVDD
DGND
1
2
3
4
5
6
A
B
C
D

3.6.4 DSP Ass'y SCHEMATIC DIAGRAM (3/7)

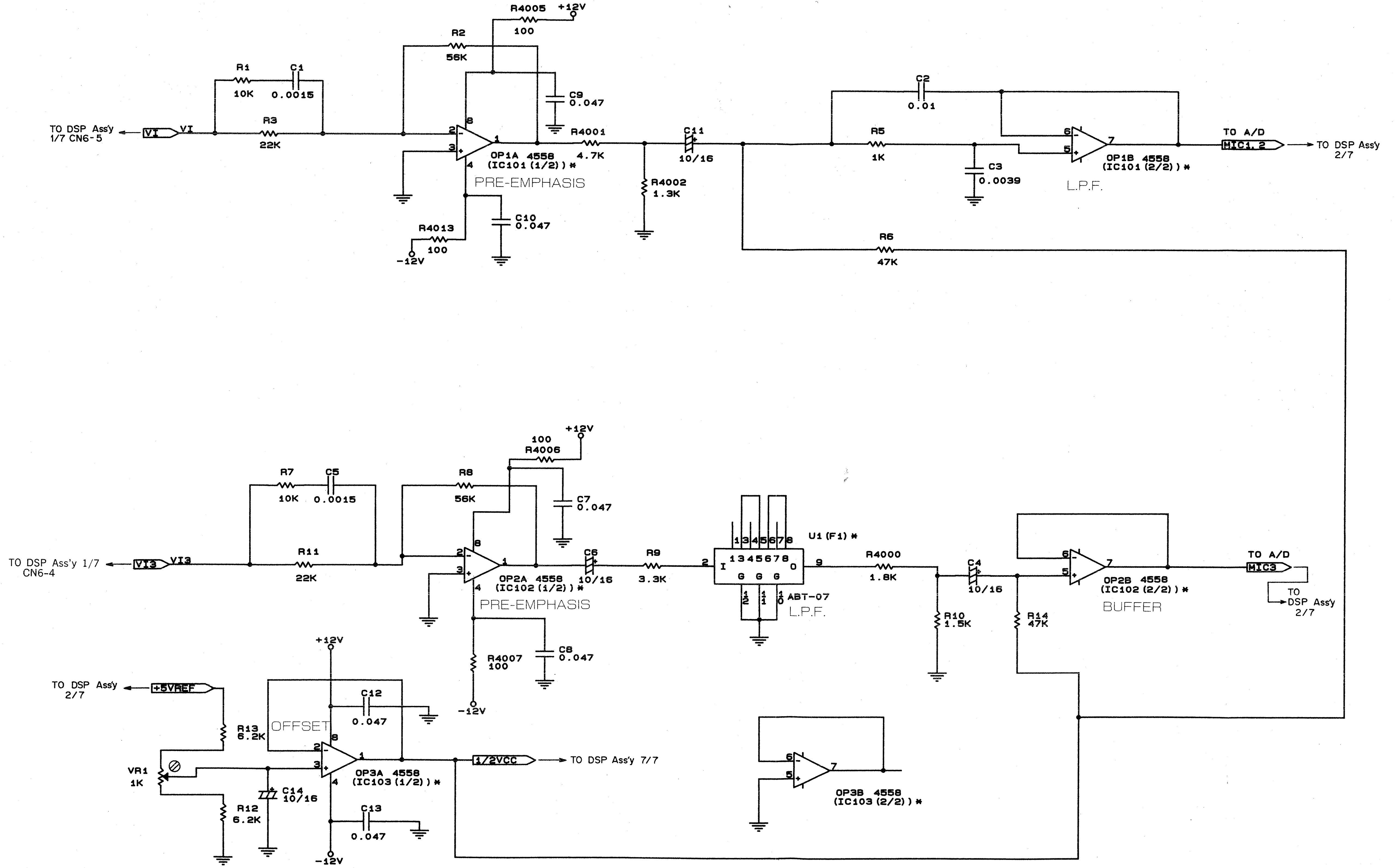

1
2
3
4
5
6
A
B
C
D
VCC
+5VD
E5
(F105) *
NFM41R10
E6
(F106) *
E7 (F107) *
NFM41R10
+5VB
+12V
NFM41R10
0.047
R73
22K
C300
CN5
/RST
ACK
DG
+5VD
+5VB
AG
-12V
+12V
POWER
TO POWER Ass'y J5
E8 (F108) *
NFM41R10
-12V
C800
0.1
C104
0.047
C106
0.047
C105
10/16
R83
100
/RESET
TO DSP Ass'y 2/7
C99
10/16
C100
0.047
U4 (X4) *
KBR-MKS 4.19MHZ
R81
1M
+5VD (R9009) *
RA9
1KX4
(R9010) *
RA10
1KX4
IC17
D-LATCH
74HC573
PD [0...7]
DSP DATA [0...7]
PA [0...9]
DSP ADDRES [0...9]
TO DSP Ass'y 2/7
PD0
PD1
ATT
SHIFT
TO DSP Ass'y 2/7
MICRO COMPUTER
IC15
UPD75516
VDD
VSS
AVSS
AVREF
P00
INT1
/RESET
/SCK0
/SB0
/SB1
P60
P61
P62
P63
P70
P71
P72
P73
P100
P80
P81
P82
P83
P113
P112
P111
P110
AN1
AN0
P143
P142
P141
P23
P20
P21
P22
XT1
XT2
P93
P153
IC
X1
X2
P40
P41
P42
P43
P50
P51
P52
P53
P32
P30
P31
P90
P91
P92
AN4
AN5
AN6
P101
P102
P103
P130
P131
P132
P133
P140
P12
P13
P123
P122
P121
P120
AN3
AN2
INT0
P33
PAL
PA8
PA9
TO DSP Ass'y 1/7
FG
H3 HOLE
CN8
DEBUG
RA2
22KX4
(R9002) *
CN1
DG
DT
CLK
CE0
CE1
KS01
KS02
KS03
KS04
KS05
KSI1
KSI2
KSI3
KSI4
CONTROL2
TO EXPAD Ass'y J1
R1002
22K
C115
0.047
C116
0.047
C117
0.047
RA4
22KX4
(R9004)*
R86
22K
RA101C
22KX4
(R9101 (2/4)) *
CN2
FKI1
FKI2
FKI3
DPZ1
DPZ2
DPZ3
AMU
TRM
DETM
MIC3
CONTROL1
TO EXPAD Ass'y CN2
(R9101 (3/4)) *
RA101A
22KX4
D3
RD4.7ES
B1
RA101B
22KX4
(R9101 (4/4)) *
CN4
REM
KCU
KCD
NC
KOZ11
KOZ10
KOZ9
KOZ8
KOZ7
KOZ6
KOZ5
KOZ4
KOZ3
KOZ2
KOZ1
KEYCON
TO VIDEO Ass'y J4
IC19
MSM82C43
I/O EXPANDER
EXD0
EXD1
EXD2
EXD3
EXPROG
PROG
VCC
GND
/CS
C98
0.047
R75
22K
R74
22K
RA101D
22KX4
(R9101 (1/4)) *
MOL2
MOL1
MV8
MV7
MV6
MV5
VIK4
VIK3
TO DSP Ass'y 1/7 CN3
RA11
22KX4
(R9011) *
R1000
22K
RA100C
100KX4
(R9100) *
(R9100) *
RA100D
100KX4
C109
0.047
C110
0.047
(R9005) *
RA5
22KX4
(R9001 (1/4)) *
RA1A
22KX4
RA1B
22KX4
RA1C
22KX4
RA1D
22KX4
(R9001 (2/4)) *
(R9001 (3/4)) *
(R9001 (4/4)) *
C107
0.047
C108
0.047
CC0
CC1
MV4
MV3
MV2
MV1
VIK2
VIK1
TO DSP Ass'y 1/7 CN3
TO DSP Ass'y 2/7
LATCH
INTB
TO DSP Ass'y 7/7
MUSIC BYPASS
TO DSP Ass'y 2/7
CCE/COE/CWE [0...1]
CC [0...1]
R79
1K
R80
22K
R78
1K
RA100A
100KX4
RA100B
100KX4
(R9100) *

NOTE:
Concerning the wiring number of parts in brackets and parentheses ()*.
When ordering parts from the "5. P.C.B's PARTS LIST", use the wiring number in parentheses.

3.6.5 DSP Ass'y SCHEMATIC DIAGRAM (4/7)

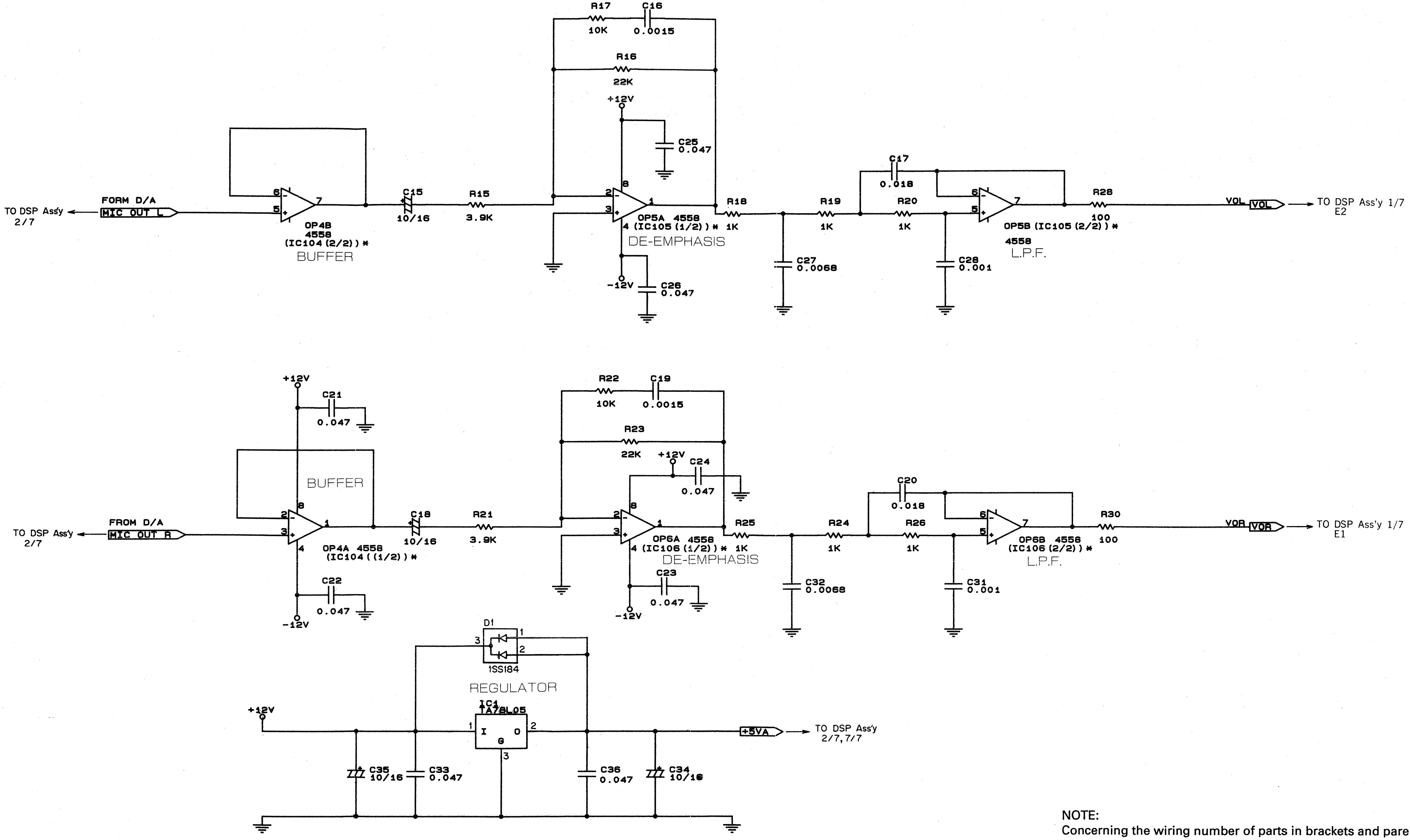

TO DSP Ass'y 2/7
DRAM ADD [0..7]
DA [0..7]
DRAM DATA [0..9]
DD [0..9]
RAS/CAS [0..2]
/RC [0..2]
R32 2.2K
C37 15pF
+5VD
VCC
+5VD
C301 0.047
IC2B
74AC74
TIMING CONTROL
/RC1 (CAS)
D
CLK
Q
PR
CL
IC3
74AC157
MULTIPLEXER
DA6
DAA6
/RASR (RAS)
1A 1B 2A 2B 3A 3B 4A 4B
1Y 2Y 3Y 4Y
A/B
G
IC5
IC4
IC6
/RC0
/RC1
/RC2
RAS
CAS
WE
OE
VCC
GND
A0 A1 A2 A3 A4 A5 A6 A7
D0 D1 D2 D3
DA0 DA1 DA2 DA3 DA4 DA5 DAA6 DA7
DD0 DD1 DD2 DD3
DD4 DD5 DD6 DD7
DD8 DD9
C38 0.047
C39 0.047
C40 0.047
MSM41464JS
DRAM
R2002 22K
R2003 22K
R35 22K
R34 22K

3.6.6 DSP Ass'y SCHEMATIC DIAGRAM (5/7)


TO DSP Ass'y 1/7 CN6-5
VI
R1 10K
C1 0.0015
R3 22K
R2 56K
R4005 100
+12V
C9 0.047
OP1A 4558 (IC101 (1/2)) *
PRE-EMPHASIS
R4001 4.7K
R4013 100
-12V
C10 0.047
C11 10/16
R4002 1.3K
C2 0.01
R5 1K
C3 0.0039
OP1B 4558 (IC101 (2/2)) *
L.P.F.
TO A/D
MIC1, 2
TO DSP Ass'y 2/7
R6 47K
TO DSP Ass'y 1/7 CN6-4
VI3
R7 10K
C5 0.0015
R11 22K
R8 56K
100 R4006
+12V
C7 0.047
OP2A 4558 (IC102 (1/2)) *
PRE-EMPHASIS
R4007 100
-12V
C8 0.047
C6 10/16
R9 3.3K
U1 (F1) *
1345678
I O
G G G
ABT-07
L.P.F.
R4000 1.8K
R10 1.5K
C4 10/16
R14 47K
OP2B 4558 (IC102 (2/2)) *
BUFFER
TO A/D
MIC3
TO DSP Ass'y 2/7
TO DSP Ass'y 2/7
+5VREF
R13 6.2K
VR1 1K
R12 6.2K
C14 10/16
+12V
OFFSET
C12 0.047
OP3A 4558 (IC103 (1/2)) *
C13 0.047
-12V
1/2VCC
TO DSP Ass'y 7/7
OP3B 4558 (IC103 (2/2)) *

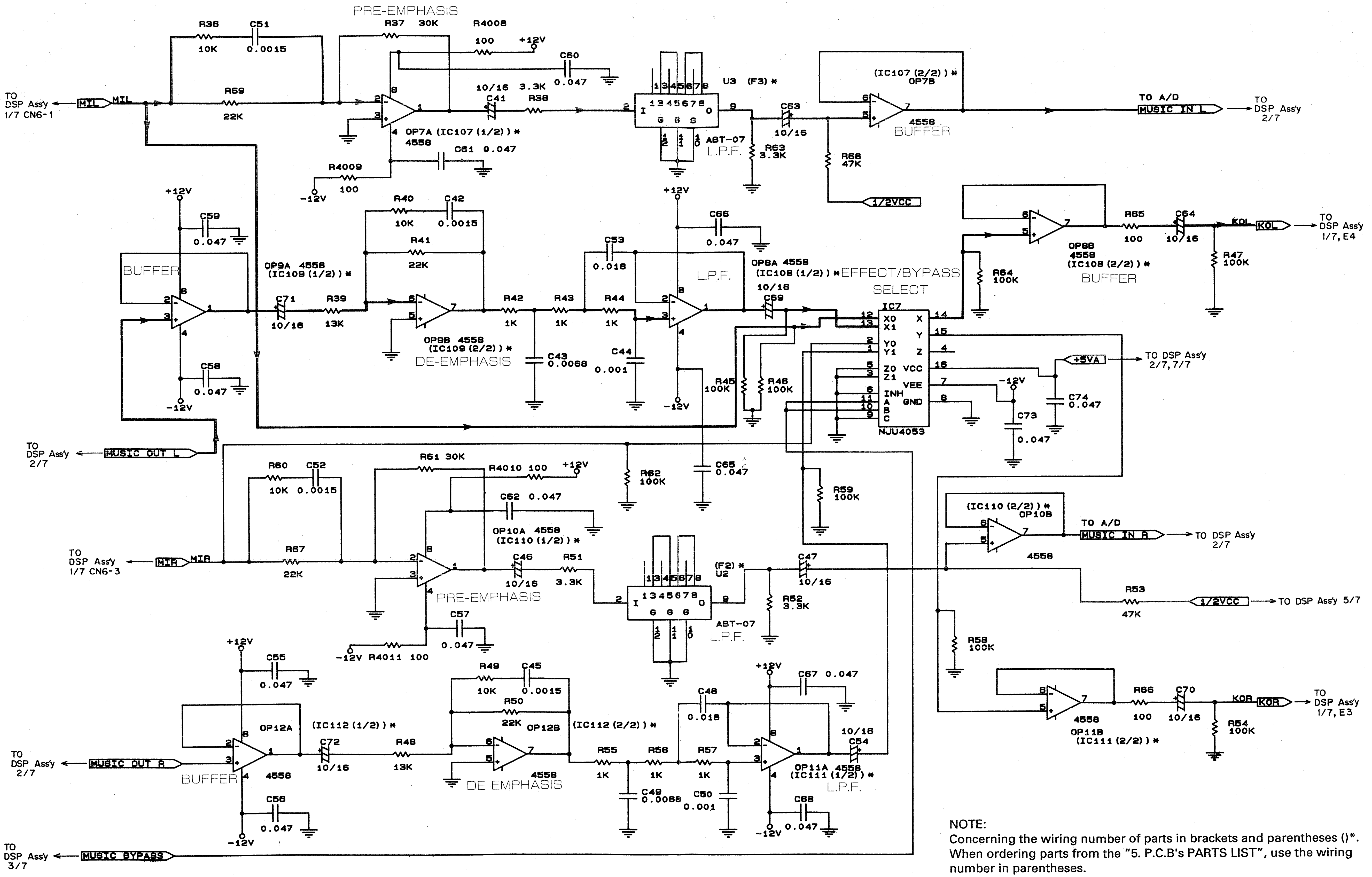
NOTE:
Concerning the wiring number of parts in brackets and parentheses ()*.
When ordering parts from the "5. P.C.B's PARTS LIST", use the wiring number in parentheses.

3.6.7 DSP Ass'y SCHEMATIC DIAGRAM (6/7)


R17
10K
C16
0.0015
R16
22K
+12V
C25
0.047
TO DSP Ass'y
2/7
FORM D/A
MIC OUT L
OP4B
4558
(IC104 (2/2)) *
BUFFER
C15
10/16
R15
3.9K
OP5A 4558
(IC105 (1/2)) *
DE-EMPHASIS
-12V
C26
0.047
R18
1K
R19
1K
C27
0.0068
C17
0.018
R20
1K
C28
0.001
OP5B (IC105 (2/2)) *
4558
L.P.F.
R28
100
VOL
TO DSP Ass'y 1/7
E2
+12V
C21
0.047
BUFFER
TO DSP Ass'y
2/7
FROM D/A
MIC OUT R
OP4A 4558
(IC104 ((1/2)) *
C22
0.047
-12V
C18
10/16
R21
3.9K
R22
10K
C19
0.0015
R23
22K
+12V
C24
0.047
OP6A 4558
(IC106 (1/2)) *
DE-EMPHASIS
C23
0.047
-12V
R25
1K
R24
1K
C32
0.0068
C20
0.018
R26
1K
C31
0.001
OP6B 4558
(IC106 (2/2)) *
L.P.F.
R30
100
VOR
TO DSP Ass'y 1/7
E1
D1
1SS184
REGULATOR
IC1
TA78L05
I
O
G
+12V
C35
10/16
C33
0.047
C36
0.047
C34
10/16
+5VA
TO DSP Ass'y
2/7, 7/7

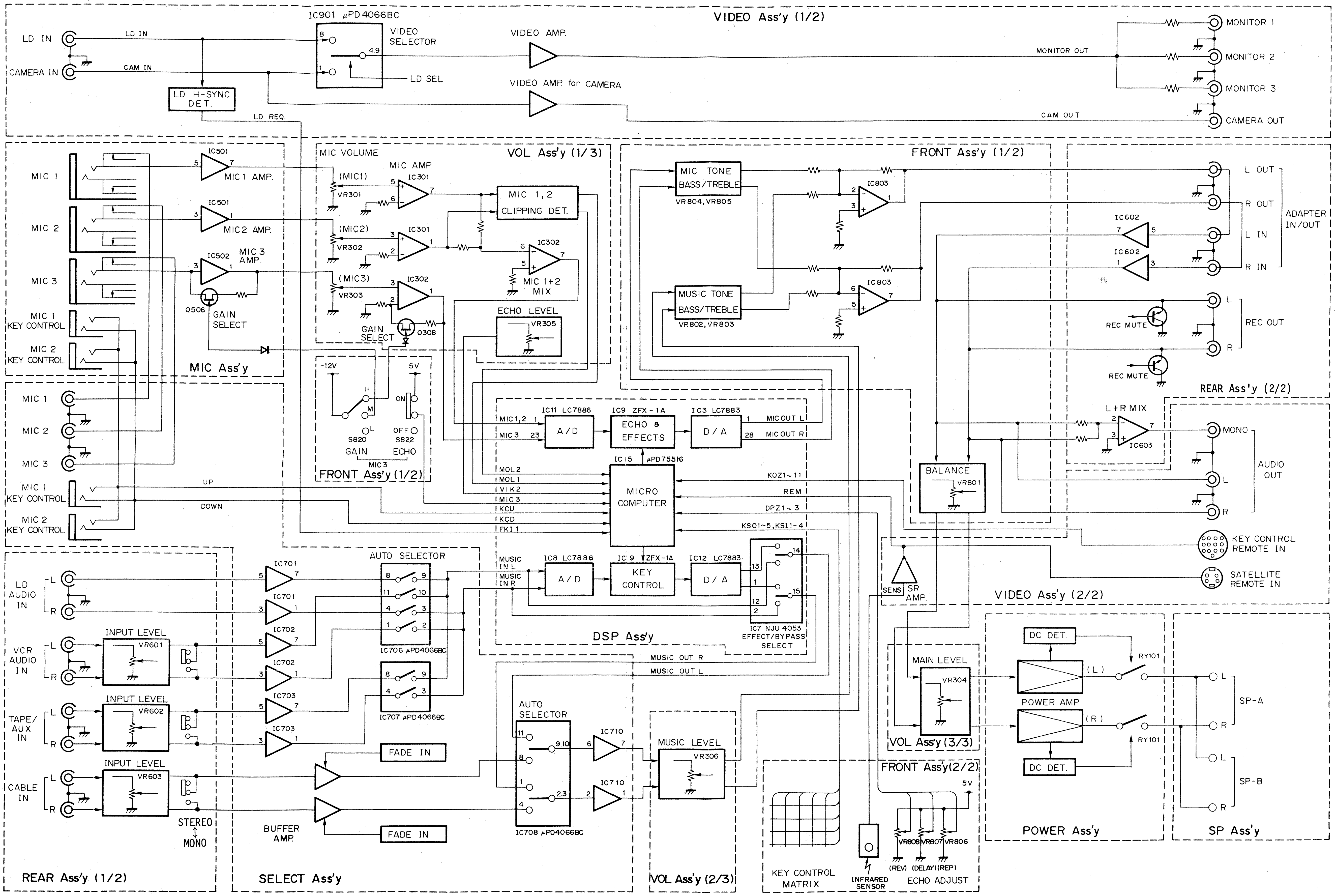
NOTE:
Concerning the wiring number of parts in brackets and parentheses ()*.
When ordering parts from the "5. P.C.B's PARTS LIST", use the wiring number in parentheses.

3.6.8 DSP Ass'y SCHEMATIC DIAGRAM (7/7)


PRE-EMPHASIS
R36
10K
C51
0.0015
R37 30K
R4008
100
+12V
C60
0.047
R69
22K
TO
DSP Ass'y
1/7 CN6-1
MIL
OP7A (IC107 (1/2)) *
4558
10/16
C41
3.3K
R38
C61 0.047
R4009
100
-12V
U3 (F3) *
1345678
ABT-07
L.P.F.
C63
10/16
R63
3.3K
R68
47K
1/2VCC
(IC107 (2/2)) *
OP7B
4558
BUFFER
TO A/D
MUSIC IN L
TO
DSP Ass'y
2/7
+12V
C59
0.047
BUFFER
C58
0.047
-12V
R40
10K
C42
0.0015
R41
22K
OP9A 4558
(IC109 (1/2)) *
C71
10/16
R39
13K
OP9B 4558
(IC109 (2/2)) *
DE-EMPHASIS
R42
1K
R43
1K
R44
1K
C43
0.0068
C44
0.001
C53
0.018
L.P.F.
C66
0.047
OP8A 4558
(IC108 (1/2)) *
EFFECT/BYPASS
SELECT
10/16
C69
R45
100K
R46
100K
IC7
X0
X1
Y0
Y1
Z0
Z1
INH
A
B
C
X
Y
Z
VCC
VEE
GND
NJU4053
R64
100K
R65
100
C64
10/16
KOL
TO
DSP Ass'y
1/7, E4
OP8B
4558
(IC108 (2/2)) *
BUFFER
R47
100K
+5VA
TO DSP Ass'y
2/7, 7/7
-12V
C73
0.047
C74
0.047
TO
DSP Ass'y
2/7
MUSIC OUT L
R60
10K
C52
0.0015
R61 30K
R4010 100
+12V
R62
100K
C65
0.047
C62 0.047
OP10A 4558
(IC110 (1/2)) *
R59
100K
TO
DSP Ass'y
1/7 CN6-3
MIR
R67
22K
C46
10/16
R51
3.3K
PRE-EMPHASIS
C57
0.047
-12V R4011 100
(F2) *
U2
1345678
ABT-07
L.P.F.
R52
3.3K
C47
10/16
(IC110 (2/2)) *
OP10B
4558
TO A/D
MUSIC IN R
TO DSP Ass'y
2/7
R53
47K
1/2VCC
TO DSP Ass'y 5/7
R58
100K
+12V
C55
0.047
OP12A
(IC112 (1/2)) *
C72
10/16
R48
13K
R49
10K
C45
0.0015
R50
22K
OP12B
(IC112 (2/2)) *
4558
DE-EMPHASIS
R55
1K
R56
1K
R57
1K
C49
0.0068
C50
0.001
C48
0.018
+12V
C67 0.047
10/16
C54
OP11A 4558
(IC111 (1/2)) *
L.P.F.
C68
0.047
-12V
R66
100
C70
10/16
KOR
TO
DSP Ass'y
1/7, E3
4558
OP11B
(IC111 (2/2)) *
R54
100K
TO
DSP Ass'y
2/7
MUSIC OUT R
BUFFER
4558
C56
0.047
-12V
TO
DSP Ass'y
3/7
MUSIC BYPASS

NOTE:
Concerning the wiring number of parts in brackets and parentheses ()*.
When ordering parts from the "5. P.C.B's PARTS LIST", use the wiring number in parentheses.

4. BLOCK DIAGRAM


VIDEO Ass'y (1/2)
LD IN
CAMERA IN
LD IN
CAM IN
IC901 μPD4066BC
VIDEO SELECTOR
LD SEL
LD H-SYNC DET.
LD REQ.
VIDEO AMP.
VIDEO AMP. for CAMERA
MONITOR OUT
CAM OUT
MONITOR 1
MONITOR 2
MONITOR 3
CAMERA OUT
MIC 1
MIC 2
MIC 3
MIC 1 KEY CONTROL
MIC 2 KEY CONTROL
IC501
MIC 1 AMP.
MIC 2 AMP.
IC502
MIC 3 AMP.
Q506
GAIN SELECT
MIC Ass'y
MIC VOLUME
VOL Ass'y (1/3)
(MIC1)
(MIC2)
(MIC3)
VR301
VR302
VR303
MIC AMP.
IC301
IC302
MIC 1, 2 CLIPPING DET.
MIC 1+2 MIX
ECHO LEVEL
VR305
GAIN SELECT
Q308
-12V
5V
S820
S822
GAIN
ECHO
MIC 3
FRONT Ass'y (1/2)
FRONT Ass'y (1/2)
MIC TONE BASS/TREBLE
VR804, VR805
MUSIC TONE BASS/TREBLE
VR802, VR803
IC803
IC602
L OUT
R OUT
L IN
R IN
ADAPTER IN/OUT
REC MUTE
REC OUT
REAR Ass'y (2/2)
L+R MIX
IC603
MONO
AUDIO OUT
BALANCE
VR801
KEY CONTROL REMOTE IN
SATELLITE REMOTE IN
SENS
SR AMP.
VIDEO Ass'y (2/2)
IC11 LC7886
IC9 ZFX-1A
IC3 LC7883
A/D
ECHO & EFFECTS
D/A
MIC 1, 2
MIC 3
MIC OUT L
MIC OUT R
IC15 μPD75516
MICRO COMPUTER
MOL 2
MOL 1
VIK2
MIC 3
KCU
KCD
FKI 1
KOZ1~11
REM
DPZ1~3
KSO1~5, KSI1~4
UP
DOWN
MUSIC IN L
MUSIC IN R
IC8 LC7886
IC 9 ZFX-1A
IC12 LC7883
KEY CONTROL
IC7 NJU 4053
EFFECT/BYPASS SELECT
DSP Ass'y
MUSIC OUT R
MUSIC OUT L
LD AUDIO IN
VCR AUDIO IN
TAPE/AUX IN
CABLE IN
INPUT LEVEL
VR601
VR602
VR603
STEREO
MONO
REAR Ass'y (1/2)
IC701
IC702
IC703
AUTO SELECTOR
IC706 μPD4066BC
IC707 μPD4066BC
FADE IN
BUFFER AMP.
AUTO SELECTOR
IC710
IC708 μPD4066BC
SELECT Ass'y
MUSIC LEVEL
VR306
VOL Ass'y (2/3)
KEY CONTROL MATRIX
INFRARED SENSOR
FRONT Ass'y (2/2)
VR808
VR807
VR806
(REV)
(DELAY)
(REP)
ECHO ADJUST
MAIN LEVEL
VR304
VOL Ass'y (3/3)
DC DET.
POWER AMP
(L)
(R)
RY101
POWER Ass'y
SP-A
SP-B
SP Ass'y

5. P.C.B's PARTS LIST

NOTES:

- *Part without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω 56×10^1 561 .... RD1/8PM $\boxed{5}\boxed{6}\boxed{1}$ *J*
47kΩ 47×10^3 473 .... RD1/4PS $\boxed{4}\boxed{7}\boxed{3}$ *J*
0.5Ω 0R5 .... RN2H $\boxed{0}\boxed{R}\boxed{5}$ *K*
1Ω 010 .... RS1P $\boxed{0}\boxed{1}\boxed{0}$ *K*

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ 562×10^1 5621 .... RN1/4SR $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ *F*

POWER Ass'y (AWZ3449)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	Q105,106	TRANSISTOR	2SC1845
	Q107,108	TRANSISTOR	2SA1145
	Q109,110	TRANSISTOR	2SC2705
	Q111,112	TRANSISTOR	2SC3298
	Q113,114	TRANSISTOR	2SA1306
	Q115,116	TRANSISTOR	2SC1845
	Q118,119	TRANSISTOR	2SC1740S
	Q120	TRANSISTOR	2SA1115
	Q121	TRANSISTOR	2SC1845
	Q122	TRANSISTOR	2SB560
	Q131−134	TRANSISTOR	2SA992
	Q202	TRANSISTOR	2SC1740S
	D101,102	DIODE	HSS104−02
	D107−110	DIODE	HSS104−02
	D111−114	ZENER DIODE	RD5.6EB
	D115−121	DIODE	HSS104−02
	D122	ZENER DIODE	RD12ESB2
	D123−125	DIODE	HSS104−02
	D126	DIODE	RB602
	D130−134	DIODE	HSS104−02
	D140	ZENER DIODE	RD10ESB
	D202,203	DIODE	HSS104−02
	D204	ZENER DIODE	RD4.7ESB2
	D205−208	DIODE	10E2FD
	D210,211	DIODE	S5566
	D212	DIODE	HSS104−02
	D213,214	LED (RED)	AEL1108
	D215	DIODE	HSS104−02
	D217−220	DIODE	10E2FD
	D221	DIODE	S5566
	D223−230	DIODE	11E2

COILS

Mark	No.	Description	Part No.
	L203,204	FERRITE BEAD	ATX1008

CAPACITORS

Mark	No.	Description	Part No.
	C101,102	PL.STYRENE CAPACITOR	CQSXA151J160
	C119,120	MYLOR FILM CAPACITOR	CQMA472K50
	C121,122	ELECTR.CAPACITOR	CEAS4R7M50
	C127,128	ELECTROLYTIC CAPACITOR	CEEA101M25
	C129,130	ELECTROLYTIC CAPACITOR	CEAS101M63
	C131,132	ELECTROLYTIC CAPACITOR	CEEA101M16
	C133,134	MICA CAPACITOR	CMA120J500
	C135,136	MYLOR FILM CAPACITOR	CQMA561K50
	C137,138	MICA CAPACITOR	CMA070D500
	C139−142	MYLOR FILM CAPACITOR	CQMA102K50
	C143−146	MICA CAPACITOR	CMA151J500
	C147,148	CAPACITOR (CERAMIC) (4700P)	ACG−009
	C152	ELECTROLYTIC CAPACITOR	CEAS471M6
	C153	ELECTR.CAPACITOR	CEAS101M25
	C155	ELECTR.CAPACITOR	CEAS3R3M100
	C156,157	ELECTROLYTIC CAPACITOR (12000μ/63V)	ACH1108
	C159−162	AUDIO FILM CAPACITOR	CFTXA104J50
	C163,164	ELECTR.CAPACITOR	CEANPR22M50
	C173	MYLOR FILM CAPACITOR	CQMA473K250
	C175	ELECTR.CAPACITOR	CEAS100M50
	C176	ELECTR.CAPACITOR	CEAS331M16
	C179,180	ELECTROLYTIC CAPACITOR	CEXA470M50
	C181,182	CERAMIC CAPACITOR	CCDSL151J50
	C183,184	CERAMIC CAPACITOR	CKDYF473Z50
	C185,186	CAPACITOR (CERAMIC) (4700P)	ACG−009
	C191,192	CAPACITOR (CERAMIC) (4700P)	ACG−009
	C195,196	CERAMIC CAPACITOR	CKDYB103K50
	C201	MYLOR FILM CAPACITOR	CQMA333K250
	C202,203	ELECTR.CAPACITOR	CEAS332M35
	C204,205	ELECTROLYTIC CAPACITOR	CEHAQ470M25
	C206	MYLOR FILM CAPACITOR	CQMA104K50
	C207	ELECTR.CAPACITOR	CEAS332M16
	C214	ELECTR.CAPACITOR	CEAS101M10
	C215	ELECTR.CAPACITOR	CEAS221M10
	C217	CERAMIC CAPACITOR	CKDYB103K50
	C218	ELECTR.CAPACITOR	CEAS100M50
	C219,220	CERAMIC CAPACITOR	CKDYB103K50
	C221	ELECTR.CAPACITOR	CEAS0R1M50
	C226−229	ELECTR.CAPACITOR	CEAS101M25
	C230	ELECTR.CAPACITOR	CEAS470M25
	C237	ELECTR.CAPACITOR	CEAS332M16
	C238	ELECTR.CAPACITOR	CEAS100M25
	C239	ELECTROLYTIC CAPACITOR	CEJA100M25

RESISTORS

Mark	No.	Description	Part No.
	R101,102	CARBON FILM RESISTOR	RD1/4PM272J
⚠	R103−110	FUSLIBLE RESISTOR	RFA1/4PS4R7J
	R111,112	RESISTOR (0.47, 5W)	ACN−130
⚠	R113−116	FUSLIBLE RESISTOR	RFA1/4PS101J
	R117,118	CARBON FILM RESISTOR	RD1/4PMFL100J
	R129,130	CARBON FILM RESISTOR	RD1/4PM102J
	R131,132	CARBON FILM RESISTOR	RD1/2PM561J
	R135,136	CARBON FILM RESISTOR	RD1/2PM114J
	R141,142	CARBON FILM RESISTOR	RD1/2PM683J
⚠	R143,144	FUSLIBLE RESISTOR	RFA1/4PS101J
	R147,148	CARBON FILM RESISTOR	RD1/4PM562J
⚠	R149−154	CARBON FILM RESISTOR	RD1/4PMFL101J
⚠	R155−158	CARBON FILM RESISTOR	RD1/4PMFL151J
	R159,160	RESISTOR (0.47, 5W)	ACN−130
⚠	R161,162	FUSLIBLE RESISTOR	RFA1/4PS680J
	R163	CARBON FILM RESISTOR	RD1/4PM471J
⚠	R164	CARBON FILM RESISTOR	RD1/4PMF4R7J
	R175,176	CARBON FILM RESISTOR	RD1/4PM153J
	R188	METAL OXIDE RESISTOR	RS2LMF562J
	R201,202	METAL OXIDE RESISTOR	RS1LMF100J

Mark	No.	Description	Part No.
⚠	R205	CARBON FILM RESISTOR	RD1/4PMFL010J
		OTHER RESISTORS	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Part No.
⚠		LITHIUM BATTERY (3V)	AEX1003
	CN17	CONNECTOR (7P)	KPE7
	CN20	CONNECTOR (4P)	KPC4
	CN21,22	CONNECTOR (9P)	KPC9
	CN24	CONNECTOR (7P)	KPE7
	RY101	RELAY	ASR1026

REG Ass'y (AWZ3450)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC201	REGULATOR IC	NJM7805FA
	IC202	REGULATOR IC	NJM79M05FA
	IC203	REGULATOR IC	M5F79M12L
	IC204	REGULATOR IC	NJM7805FA
	IC205	REGULATOR IC	M5F78M12L
	IC206	REGULATOR IC	NJM7805FA

CAPACITORS

Mark	No.	Description	Part No.
	C208	CERAMIC CAPACITOR	CKDYB103K50
	C209	ELECTR.CAPACITOR	CEHAQ100M50
	C210	CERAMIC CAPACITOR	CKDYB103K50
	C211	ELECTR.CAPACITOR	CEHAQ100M50
	C212	CERAMIC CAPACITOR	CKDYB103K50
	C213	ELECTR.CAPACITOR	CEHAQ100M50
	C222	CERAMIC CAPACITOR	CKDYB103K50
	C223	ELECTR.CAPACITOR	CEHAQ100M50
	C224	CERAMIC CAPACITOR	CKDYB103K50
	C225	ELECTR.CAPACITOR	CEHAQ100M50
	C231	CERAMIC CAPACITOR	CKDYB103K50
	C232	ELECTR.CAPACITOR	CEHAQ100M50

MIC Ass'y (AWZ3452)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC501,502	IC	UPC4570C
	Q501,502	TRANSISTOR	DTA143ES
	Q503,504	TRANSISTOR	DTC143ES
	Q506	N−FET	2SK117
	D502	DIODE	HSS104−02
	D504	DIODE	HSS104−02

COILS

Mark	No.	Description	Part No.
	L501−503	AXIAL INDUCTOR	LAU221K

CAPACITORS

Mark	No.	Description	Part No.
	C501	CERAMIC CAPACITOR	CKDYB102K50
	C502	CERAMIC CAPACITOR	CKDYF103Z50
	C503	CERAMIC CAPACITOR	CKDYB102K50
	C504	CERAMIC CAPACITOR	CKDYF103Z50
	C505	CERAMIC CAPACITOR	CKDYB102K50
	C506	CERAMIC CAPACITOR	CKDYF103Z50
	C507−509	CERAMIC CAPACITOR	CKDYB102K50
	C510	CERAMIC CAPACITOR	CKDYF103Z50
	C511−513	CERAMIC CAPACITOR	CCDSL221J50
	C514−516	AUDIO FILM CAPACITOR	CFTXA104J50
	C517	ELECTR.CAPACITOR	CEAS100M50
	C518	ELECTROLYTIC CAPACITOR	CEJA100M50
	C519	ELECTR.CAPACITOR	CEAS100M50
	C520−522	CERAMIC CAPACITOR	CCDSL330J50
	C523−525	CERAMIC CAPACITOR	CCDSL100D50
	C526−528	ELECTR.CAPACITOR	CEAS010M50
	C529−531	MYLOR FILM CAPACITOR	CQMA682J50
	C532,533	ELECTROLYTIC CAPACITOR	CEXA101M25
	C534,535	CERAMIC CAPACITOR	CKDYX104M25

RESISTORS

Mark	No.	Description	Part No.
⚠	R524,525	CARBON FILM RESISTOR	RD1/4PMFL221J
		OTHER RESISTORS	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Part No.
		JACK	AKN−210
		JACK	AKN1010

BIAS Ass'y (AWZ3453)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	Q101,102	TRANSISTOR	2SC2603

OTHERS

Mark	No.	Description	Part No.
		PURSE LOCK	AEP−076

FRONT Ass'y (AWZ3454)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC803	IC	UPC4570C
	Q801−809	TRANSISTOR	DTC143ES
	Q810	TRANSISTOR	DTA143ES
	Q811−815	TRANSISTOR	DTC143ES
	Q820	TRANSISTOR	DTA143ES
	D801−809	LED (RED,AMBER)	AEL1116
	D810	LED (GREEN,AMBER)	AEL1142
	D811−815	LED (RED,AMBER)	AEL1116
	D821−823	DIODE	HSS104−02
	D831−833	LED	AEL1128
	D835−838	LED	AEL1128
	D851−854	LED (RED,AMBER)	AEL1116

SWITCHS

Mark	No.	Description	Part No.
	S801−816	SWITCH (A/♭5/♭1/♯3/B/♭4/♮/♯4/C/♭3/♯1/♯5/D/♭2/♯2/MEMORY)	ASG1034
	S817	PUSH SWITCH (HOWLING CUT/TAPE REC/SET MEMO)	SEA4V222S
	S820	SLIDE SWITCH (MIC 3 GAIN)	ASH1025
	S822	PUSH SWITCH (MIC 3 ECHO)	ASG1028

CAPACITORS

Mark	No.	Description	Part No.
	C805,806	ELECTROLYTIC CAPACITOR	CEJA4R7M50
	C811,812	MYLOR FILM CAPACITOR	CQMA123K50
	C813,814	MYLOR FILM CAPACITOR	CQMA473K50
	C815,816	MYLOR FILM CAPACITOR	CQMA122K50
	C817,818	MYLOR FILM CAPACITOR	CQMA562K50
	C823,824	ELECTROLYTIC CAPACITOR	CEJA4R7M50
	C827,828	MYLOR FILM CAPACITOR	CQMA123K50
	C829,830	MYLOR FILM CAPACITOR	CQMA473K50
	C831,832	MYLOR FILM CAPACITOR	CQMA122K50
	C833,834	MYLOR FILM CAPACITOR	CQMA562K50
	C835,836	CERAMIC CAPACITOR	CCDSL330J50
	C837,838	ELECTROLYTIC CAPACITOR	CEJA470M16
	C843	CERAMIC CAPACITOR	CKDYB103K50
	C845,846	CERAMIC CAPACITOR	CCDSL470J50

RESISTORS

Mark	No.	Description	Part No.
	R887,888	CARBON FILM RESISTOR	RD1/4PM101J
	VR801	VARIABLE RESISTOR (20K/20K) (BALANCE)	ACS1073
	VR802	VARIABLE RESISTOR (100K/100K) (MUSIC TONE: bass)	ACS1072
	VR803	VARIABLE RESISTOR (100K/100K) (MUSIC TONE:treble)	ACS1072
	VR804	VARIABLE RESISTOR (100K/100K) (MIC TONE:bass)	ACS1072
	VR805	VARIABLE RESISTOR (100K/100K) (MIC TONE:treble)	ACS1072
	VR806	VARIABLE RESISTOR (20K) (ECHO ADJUST : REPEAT)	ACS1071
	VR807	VARIABLE RESISTOR (20K) (ECHO ADJUST : DELAY)	ACS1071
	VR808	VARIABLE RESISTOR (20K) (ECHO ADJUST : REVERS)	ACS1071
		OTHER RESISTORS	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Part No.
		REMOTE RECEIVER UNIT	AXX1010

EXPAND Ass'y (AWZ3455)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC804,805	OUTPUT EXPANDER IC	PD0012A
	Q823,824	N−FET	2SK246
	D825,826	DIODE	HSS104−02
	D841−845	DIODE	HSS104−02

CAPACITORS

Mark	No.	Description	Part No.
	C839	ELECTR.CAPACITOR	CEAS101M16
	C842	CERAMIC CAPACITOR	CKDYB103K50
	C844	CERAMIC CAPACITOR	CKDYB103K50

RESISTORS

Mark	No.	Description	Part No.
	R819	RESISTOR ARRAY (1K)	RA11T102J
	R820,821	RESISTOR ARRAY (1K)	RA4T102J
		OTHER RESISTORS	RD1/8PM□□□J

VOL Ass'y (AWZ3457)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC301	IC	UPC4570C
	IC302	OP−AMP IC	RC4558DXP
	IC304	OP−AMP IC	RC4558DXP
	IC305−307	MECHANISM DRIVER IC	TA7291S
	IC309	MECHANISM DRIVER IC	TA7291S
	IC310	OP AMP IC	RC4558DXP
	Q301	TRANSISTOR	DTC143ES
	Q302	TRANSISTOR	2SC2458
	Q303	TRANSISTOR	DTC143ES
	Q304	TRANSISTOR	2SC2458
	Q305,306	TRANSISTOR	DTC143ES
	Q308	N−FET	2SK117
	D301−304	DIODE	HSS104−02

COILS

Mark	No.	Description	Part No.
	F301	FILTER	ATF1071

CAPACITORS

Mark	No.	Description	Part No.
	C301	ELECTROLYTIC CAPACITOR	CEXA470M25
	C303	ELECTROLYTIC CAPACITOR	CEXA470M25
	C304	ELECTR.CAPACITOR	CEAS470M16
	C305	CERAMIC CAPACITOR	CKDYB103K50
	C307−309	ELECTR.CAPACITOR	CEAS100M50
	C310	CERAMIC CAPACITOR	CKDYB103K50
	C312	ELECTR.CAPACITOR	CEAS470M16
	C313	CERAMIC CAPACITOR	CKDYB103K50
	C314	CERAMIC CAPACITOR	CCDSL330J50
	C315	CERAMIC CAPACITOR	CKDYB103K50
	C316	CERAMIC CAPACITOR	CCDSL330J50
	C317,318	CERAMIC CAPACITOR	CKDYB103K50
	C319	CERAMIC CAPACITOR	CKDYF473Z50
	C320	CERAMIC CAPACITOR	CCDSL330J50
	C321	CERAMIC CAPACITOR	CKDYF473Z50
	C322	CERAMIC CAPACITOR	CCDSL470J50
	C323,324	ELECTR.CAPACITOR	CEAS470M16
	C325	CERAMIC CAPACITOR	CCDSL330J50
	C326	CERAMIC CAPACITOR	CKDYB103K50
	C327	CERAMIC CAPACITOR	CKDYF473Z50
	C328,329	CERAMIC CAPACITOR	CCDSL101J50
	C330	CERAMIC CAPACITOR	CKDYF473Z50
	C332	ELECTR.CAPACITOR	CEAS010M50
	C333,334	MYLOR FILM CAPACITOR	CQMA473K50
	C335−337	ELECTR.CAPACITOR	CEAS010M50
	C339,340	CERAMIC CAPACITOR	CCDSL101J50
	C351,352	ELECTR.CAPACITOR	CEAS100M50
	C353,354	ELECTR.CAPACITOR	CEAS470M25
	C355−359	CERAMIC CAPACITOR	CKDYB103K50

RESISTORS

Mark	No.	Description	Part No.
	VR301	VR (50K/20K) (MIC 1 Volume control)	ACX1057
	VR302	VR (50K/20K) (MIC 2 Volume control)	ACX1057
	VR303	VR (20K) (MIC 3 Volume control)	ACT1069
	VR304	VR (50K/100K) (MAIN Volume control)	ACX1058
	VR305	VR (50K) (MIC ECHO control)	ACX1059
	VR306	VR (20K/20K) (MUSIC control)	ACT1068
		OTHER RESISTORS	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Part No.
	CN8	CONNECTOR (11P)	KPE11
	CN11	CONNECTOR (13P)	KPE13
	CN14	CONNECTOR (7P)	KPE7

VIDEO Ass'y (AWZ3458)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC901	LOGIC IC	UPD4066BC
	IC902	TR−ARRAY	M54565P
	Q901	TRANSISTOR	DTC124ES
	Q902	TRANSISTOR	2SC2458
	Q904,905	TRANSISTOR	2SC2458
	Q906	TRANSISTOR	2SC1740S
	Q907	TRANSISTOR	DTA124ES
	Q908	TRANSISTOR	2SC1740S
	Q909	TRANSISTOR	DTA143ES
	Q910	TRANSISTOR	DTC143ES
	Q911	TRANSISTOR	2SD438
	Q912	TRANSISTOR	2SB560
	Q913	TRANSISTOR	DTA143ES
	Q914	TRANSISTOR	DTC143ES
	Q915	TRANSISTOR	2SA933S
	Q916	TRANSISTOR	2SC1740S
	Q917	TRANSISTOR	DTA143ES
	Q918	TRANSISTOR	DTC143ES
	Q919	TRANSISTOR	2SA933S
	Q920	TRANSISTOR	2SC3245
	Q921	TRANSISTOR	DTC124ES
	Q922	TRANSISTOR	DTA143ES
	D901	ZENER DIODE	RD5.1ESB
	D902,903	DIODE	HSS104−02
	D904	ZENER DIODE	RD4.7ESB2

COILS

Mark	No.	Description	Part No.
	L901	LINE FILTER	ATF1006

CAPACITORS

Mark	No.	Description	Part No.
	C901,902	ELECTR.CAPACITOR	CEAS330M16
	C903−912	CERAMIC CAPACITOR	CKDYF103Z50
	C913	ELECTR.CAPACITOR	CEAS330M16
	C914	CERAMIC CAPACITOR	CKDYF103Z50
	C915	ELECTR.CAPACITOR	CEAS100M50
	C916	ELECTR.CAPACITOR	CEAS101M10
	C917	CERAMIC CAPACITOR	CCCSL180J50
	C918	ELECTROLYTIC CAPACITOR	CEAS222M6
	C919	AUDIO FILM CAPACITOR	CFTXA103J50
	C920−922	CERAMIC CAPACITOR	CKDYB391K50
	C923	AUDIO FILM CAPACITOR	CFTXA473J50
	C927	CERAMIC CAPACITOR	CKDYF473Z50
	C928	AUDIO FILM CAPACITOR	CFTXA473J50
	C929	ELECTR.CAPACITOR	CEAS010M50
	C930	ELECTR.CAPACITOR	CEAS221M10
	C931	AUDIO FILM CAPACITOR	CFTXA103J50
	C932,933	ELECTR.CAPACITOR	CEAS221M10
	C934	CERAMIC CAPACITOR	CCCSL390J50
	C935	AUDIO FILM CAPACITOR	CFTXA103J50
	C936	ELECTR.CAPACITOR	CEAS330M16
	C937	ELECTR.CAPACITOR	CEAS221M10
	C938	ELECTROLYTIC CAPACITOR	CEAS471M6
	C939	AUDIO FILM CAPACITOR	CFTXA103J50
	C940	CERAMIC CAPACITOR	CKDYB103K50
	C941	CERAMIC CAPACITOR	CKDYB102K50
	C942	ELECTR.CAPACITOR	CEAS102M10
	C943,944	CKA (0.01/AC400V)	ACG1002
	C945	CERAMIC CAPACITOR	CKDYF473Z50

RESISTORS

Mark	No.	Description	Part No.
⚠	R949	CARBON FILM RESISTOR	RD1/4PMFL100J
⚠	R951	FUSLIBLE RESISTOR	RFA1/4PS100J
⚠	R952	CARBON FILM RESISTOR	RD1/4PMF100J
⚠	R959	FUSLIBLE RESISTOR	RFA1/4PS100J
	R968	RESISTOR ARRAY 10K	RA11T103J
		OTHER RESISTORS	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Part No.
		PIN JACK (2P)	AKB1100
		PIN JACK (1P)	AKB1139
		DIN SOCKET (13P)	AKP1004
		SOCKET	AKP1016
	CN23	CONNECTOR (5P)	KPE5
	CN25	CONNECTOR (10P)	KPE10
	CN27	CONNECTOR (7P)	KPE7
	CN901	PIN JACK (6P)	AKB1183

SP Ass'y (AWZ3460)

COILS

Mark	No.	Description	Part No.
	L251,252	COIL	ATH1011

CAPACITORS

Mark	No.	Description	Part No.
	C251–254	CERAMIC CAPACITOR	CKDYB103K50
	C255,256	CERAMIC CAPACITOR	CKDYB102K50
	C341,342	CERAMIC CAPACITOR	CKDYB102K50
	C343–346	CERAMIC CAPACITOR	CKDYF473Z50

RESISTORS

Mark	No.	Description	Part No.
⚠	R251,252	CARBONFILM RESISTOR	RD1/2PMFL100J
⚠	R253	CARBON FILM RESISTOR	RD1/4PMF100J
⚠	R254	CARBON FILM RESISTOR	RD1/4PMF100J

OTHERS

Mark	No.	Description	Part No.
		SPEAKER TERMINAL 8–P	AKE1011

TONE Ass'y (AWZ3558)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC401,402	IC	UPC4570C

CAPACITORS

Mark	No.	Description	Part No.
	C401,402	ELECTROLYTIC CAPACITOR	CEXA100M50
	C403,404	ELECTR.CAPACITOR	CEAS100M50
	C405,406	CERAMIC CAPACITOR	CKCYB471K50
	C407,408	CERAMIC CAPACITOR	CCDSL030C50
	C409,410	ELECTROLYTIC CAPACITOR	CEXA470M25
	C411,412	CERAMIC CAPACITOR	CKCYB561K50
	C421,422	ELECTR.CAPACITOR	CEAS100M50
	C425,426	ELECTROLYTIC CAPACITOR	CEXA100M50
	C440,441	ELECTROLYTIC CAPACITOR	CEXA470M25

RESISTORS

Mark	No.	Description	Part No.
		OTHER RESISTORS	RD1/8PM□□□J

SELECT Ass'y (AWZ3461)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC701	IC	UPC4570C
	IC702–705	OP–AMP IC	RC4558DXP
	IC706–708	LOGIC IC	UPD4066BC
	IC709,710	IC	UPC4570C
	IC711	OP–AMP IC	RC4558DXP
	Q701–706	TRANSISTOR	2SC1845
	Q707,708	TRANSISTOR	DTC124ES
	Q710,711	TRANSISTOR	DTC143ES
	Q712	TRANSISTOR	DTA124ES
	Q713,714	TRANSISTOR	DTA143ES
	Q716	TRANSISTOR	DTA124ES
	Q718	TRANSISTOR	DTA124ES
	Q719–721	TRANSISTOR	2SC1845
	D701–704	DIODE	HSS104–02
	D706,707	DIODE	HSS104–02

COILS

Mark	No.	Description	Part No.
	L701–703	AXIAL INDUCTOR	LAU221K

CAPACITORS

Mark	No.	Description	Part No.
	C701,702	ELECTROLYTIC CAPACITOR	CEXA100M50
	C703,704	CERAMIC CAPACITOR	CCCSL151J50
	C705,706	CERAMIC CAPACITOR	CCCSL330J50
	C707,708	ELECTROLYTIC CAPACITOR	CEXA100M50
	C709,710	ELECTR.CAPACITOR	CEAS100M50
	C711,712	CERAMIC CAPACITOR	CCCSL151J50
	C713,714	CERAMIC CAPACITOR	CCCSL330J50
	C715–718	ELECTR.CAPACITOR	CEAS100M50
	C719,720	CERAMIC CAPACITOR	CCCSL151J50
	C721,722	CERAMIC CAPACITOR	CCCSL330J50
	C723–726	ELECTR.CAPACITOR	CEAS100M50
	C727,728	CERAMIC CAPACITOR	CCCSL181J50
	C729,730	CERAMIC CAPACITOR	CCCSL221J50
	C731,732	ELECTR.CAPACITOR	CEAS470M10
	C733,734	ELECTR.CAPACITOR	CEAS100M25
	C735,736	ELECTROLYTIC CAPACITOR	CEXA101M25
	C737	MYLOR FILM CAPACITOR	CQMA472K50
	C738	ELECTR.CAPACITOR	CEASR33M50
	C739–742	ELECTROLYTIC CAPACITOR	CEXA100M50
	C743	ELECTR.CAPACITOR	CEASR33M50
	C744,745	CERAMIC CAPACITOR	CKDYF103Z50
	C746	ELECTR.CAPACITOR	CEAS010M50
	C747–749	CERAMIC CAPACITOR	CKDYF473Z50
	C750–752	CERAMIC CAPACITOR	CKDYB102K50
	C753–755	CERAMIC CAPACITOR	CCCSL221J50
	C756–758	ELECTR.CAPACITOR	CEAS010M50
	C759–761	ELECTR.CAPACITOR	CEAS100M50
	C762	ELECTR.CAPACITOR	CEAS101M16
	C763,764	CERAMIC CAPACITOR	CCCSL330J50
	C765	ELECTR.CAPACITOR	CEAS101M16
	C766	CERAMIC CAPACITOR	CKDYB103K50
	C767,768	CERAMIC CAPACITOR	CCDSL330J50
	C769,770	ELECTROLYTIC CAPACITOR	CEXA100M50
	C771,772	ELECTR.CAPACITOR	CEAS100M50
	C773–775	CERAMIC CAPACITOR	CKDYB102K50
	C776–781	CERAMIC CAPACITOR	CCDSL330J50
	C782,783	CERAMIC CAPACITOR	CCDSL470J50

RESISTORS

Mark	No.	Description	Part No.
⚠	R790,R1003	FUSLIBLE RESISTOR	RFA1/4PS330J
		OTHER RESISTORS	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Part No.
		PIN JACK (1P)	AKB1139
		JACK	AKN–210
	CN15	CONNECTOR (10P)	KPE10

REAR Ass'y (AWZ3462)

SEMICONDUCTOR

Mark	No.	Description	Part No.
	IC601	OP–AMP IC	RC4558DXP
	IC602	IC	UPC4570C
	IC603	OP–AMP IC	RC4558DXP
	Q601,602	TRANSISTOR.	DTC143ES
	Q603–606	TRANSISTOR	2SA1048
	Q607–615	TRANSISTOR	2SC3327
	Q617,618	TRANSISTOR	2SC3327

SWITCHS

Mark	No.	Description	Part No.
	S601	SLIDE SWITCH (VCR MODE)	ASH1027
	S602	SLIDE SWITCH (TAPE/AUX MODE)	ASH1027
	S603	SLIDE SWITCH (CABLE MODE)	ASH1027
	S604	SLIDE SWITCH (VCR SOURCE SELECTOR SENSITIVITY)	ASH1021
	S605	SLIDE SWITCH (TAPE/AUX SOURCE SELECTOR SENSITIVITY)	ASH1021

CAPACITORS

Mark	No.	Description	Part No.
	C601−608	CERAMIC CAPACITOR	CKDYB391K50
	C609,610	ELECTR.CAPACITOR	CEAS330M16
	C611,612	MYLOR FILM CAPACITOR	CQMA223K50
	C613,614	MYLOR FILM CAPACITOR	CQMA104K50
	C615,616	ELECTROLYTIC CAPACITOR	CEXA101M25
	C617,618	ELECTROLYTIC CAPACITOR	CEXA470M25
	C619,620	CERAMIC CAPACITOR	CCDSL330J50
	C621,622	ELECTROLYTIC CAPACITOR	CEXA100M50
	C623	CERAMIC CAPACITOR	CCCSL330J50
	C624	CERAMIC CAPACITOR	CCDSL330J50
	C625	CERAMIC CAPACITOR	CCCSL330J50
	C626	ELECTR.CAPACITOR	CEAS100M50
	C627−634	CERAMIC CAPACITOR	CKDYB391K50
	C635	CERAMIC CAPACITOR	CCDSL470J50

RESISTORS

	VR601	VR (100K/100K) (VCR VOLUME control)	ACT−188
	VR602	VR (100K/100K) (TAPE/AUX VOLUME control)	ACT−188
	VR603	VR (10K/10K) (CABLE VOLUME control)	ACT1067
		OTHER RESISTORS	RD1/8PM☐☐☐J

OTHERS

		PIN JACK (4P)	AKB1101
		PIN JACK (6P)	AKB1121
	CN26	CONNECTOR (15P)	KPE15

FUSE Ass'y (AWZ3463)

No part supplied as service

DSP Ass'y (AXY1017)

SEMICONDUCTOR

	IC1	IC	TA78L05F
	IC2	IC	TC74AC74AF
	IC3	IC	TC74AC157AF
	IC4−6	DRAM (64K・4BIT)	AZC1574
	IC7	IC	NJU4053BM
	IC8	A/D CONVERTER	LC7886M
	IC9	IC	ZFX−1A
	IC10	LOGIC IC	TC74HC32AF
	IC11	A/D CONVERTER	LC7886M
	IC12,13	IC	LC7883KM
	IC15	4−BIT CPU	AZC1575
	IC17	H−CMOS IC	TC74HC573AF
	IC19	IC	MSM82C43GS
	IC101−112	OP−AMP IC	NJM4558M−D
	D1,2	CHIP DIODE	1SS184
	D3	ZENER DIODE	RD4.7ESB1

COILS

	F1−3	FILTER	ATF1071
	F101−108	CHIP EMI FILTER	NFM41R10C223

CAPACITORS

Mark	No.	Description	Part No.
	C1	CERAMIC CAPACITOR	CKSQYB152K50
	C2	CERAMIC CAPACITOR	CKSQYB103K50
	C3	CHIP CAPACITOR	CKSQYB392K50
	C4	CHIP CAPACITOR	RVJ16V10M
	C5	CERAMIC CAPACITOR	CKSQYB152K50
	C6	CHIP CAPACITOR	RVJ16V10M
	C7	CERAMIC CAPACITOR	CKSQYB473K50
	C9,10	CERAMIC CAPACITOR	CKSQYB473K50
	C11	CHIP CAPACITOR	RVJ16V10M
	C14,15	CHIP CAPACITOR	RVJ16V10M
	C16	CERAMIC CAPACITOR	CKSQYB152K50
	C17	CERAMIC CAPACITOR	CKSQYB183K50
	C18	CHIP CAPACITOR	RVJ16V10M
	C19	CERAMIC CAPACITOR	CKSQYB152K50
	C20	CERAMIC CAPACITOR	CKSQYB183K50
	C21−26	CERAMIC CAPACITOR	CKSQYB473K50
	C27	CHIP CAPACITOR	CKSQYB682K50
	C28	CHIP CAPACITOR	CKSQYB102K50
	C31	CHIP CAPACITOR	CKSQYB102K50
	C32	CHIP CAPACITOR	CKSQYB682K50
	C33	CERAMIC CAPACITOR	CKSQYB473K50
	C34,35	CHIP CAPACITOR	RVJ16V10M
	C36	CERAMIC CAPACITOR	CKSQYB473K50
	C37	CHIP CERAMIC C.	CCSQCH150J50
	C38−40	CERAMIC CAPACITOR	CKSQYB473K50
	C41	CHIP CAPACITOR	RVJ16V10M
	C42	CERAMIC CAPACITOR	CKSQYB152K50
	C43	CHIP CAPACITOR	CKSQYB682K50
	C44	CHIP CAPACITOR	CKSQYB102K50
	C45	CERAMIC CAPACITOR	CKSQYB152K50
	C46,47	CHIP CAPACITOR	RVJ16V10M
	C48	CERAMIC CAPACITOR	CKSQYB183K50
	C49	CHIP CAPACITOR	CKSQYB682K50
	C50	CHIP CAPACITOR	CKSQYB102K50
	C51,52	CERAMIC CAPACITOR	CKSQYB152K50
	C53	CERAMIC CAPACITOR	CKSQYB183K50
	C54	CHIP CAPACITOR	RVJ16V10M
	C55−60	CERAMIC CAPACITOR	CKSQYB473K50
	C63,64	CHIP CAPACITOR	RVJ16V10M
	C65−68	CERAMIC CAPACITOR	CKSQYB473K50
	C69−72	CHIP CAPACITOR	RVJ16V10M
	C73,74	CERAMIC CAPACITOR	CKSQYB473K50
	C75	CHIP CAPACITOR	RVJ16V10M
	C76−86	CERAMIC CAPACITOR	CKSQYB473K50
	C87	CHIP CAPACITOR	RVJ16V10M
	C93	CHIP CAPACITOR	RVJ16V10M
	C95	CHIP CAPACITOR	CCSQCH100D50
	C96−98	CERAMIC CAPACITOR	CKSQYB473K50
	C99	CHIP CAPACITOR	RVJ16V10M
	C100	CERAMIC CAPACITOR	CKSQYB473K50
	C104	CERAMIC CAPACITOR	CKSQYB473K50
	C105	CHIP CAPACITOR	RVJ16V10M
	C106−117	CERAMIC CAPACITOR	CKSQYB473K50
	C200,201	CHIP CAPACITOR	RVJ16V10M
	C300,301	CERAMIC CAPACITOR	CKSQYB473K50
	C400	CHIP CAPACITOR	RVJ6.3V47M
	C401	CHIP CAPACITOR	RVJ6.3V22M
	C402	CHIP CAPACITOR	CKSQYB223K50
	C403,404	CERAMIC CAPACITOR	CCSQCH560J50
	C500−502	CHIP CAPACITOR	CKSQYB223K50
	C503,504	CERAMIC CAPACITOR	CCSQCH560J50
	C600	CERAMIC CAPACITOR	CKSQYB473K50
	C800	CERAMIC CAPACITOR	CKSQYF104Z50
	C900,901	CERAMIC CAPACITOR	CKDYF222Z50
	C902	CERAMIC CAPACITOR	CCDCH101J50

RESISTORS

	R9001,9002	CHIP NETWORK	MNR34J5AJ223
	R9004,9005	CHIP NETWORK	MNR34J5AJ223
	R9009,9010	CHIP NETWORK	MNR34J5AJ102
	R9011	CHIP NETWORK	MNR34J5AJ223
	R9100	CHIP NETWORK	MNR34J5AJ104
	R9101	CHIP NETWORK	MNR34J5AJ223
	VR1	VR (1K) (For Adjustment)	AZC1578
		ALL CHIP RESISTORS	RS1/10S☐☐☐J

OTHERS

	X1	X'−TAL	AZC1576
	X4	CERAMIC RESONATOR	AZC1577

6. ADJUSTMENTS

6.1 Adjustment Item and Adjustment Point

- Adjustment Item: Adjustment of DSP Ass'y (AXY1017) offset
- Adjustment Point: VR1 of DSP Ass'y

6.2 Adjustment Procedure

Note: Adjust only the stereo mixing amplifier.

(1) Switch to the test mode.

① Connect the pin No. 4 (♯1) and No. 13 (GND), and No. 2 (♭1) and No. 10 (GND) of the DIN socket (Video Ass'y DN901) for key control and remote control with the 5.6 kΩ resistor, respectively. (Refer to Fig. 6-1.)
② Turn ON the power.
③ Check that the test mode is turned ON.

<Check of the Test Mode>

In the test mode, you can manually switch the music input function. Check with the "Automatic Input Switching Indicator" that the input position is switched with the "D.S.P. Echo Mode Switch Button" on the front panel.

Button Used	*Function Selected*
A	LASERDISC
B	VCR
C	TAPE/AUX
D	CABLE

(2) Switch to the Offset Display Mode.

① After more than 20 seconds have passed in the test mode, press the key control button "♯3". This operation switches to the offset display mode.

(3) Adjust VR1.

① Adjust VR1 of the DSP Ass'y so that the "♭5" indicator turns from amber to red by looking at the key control indicators ("♭5" - "♭1", "♮", "♯1" - "♯5") (Refer to Fig. 6-2.)

(4) Clear the test mode.

① Turn OFF the power.
② Remove the two resistors connected at the DIN socket for key control and remote control.
③ Turn ON the power again.
This operation clears the test mode.

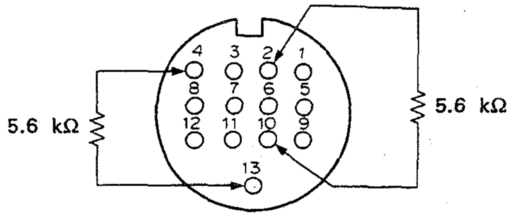


Fig. 6-1. DIN Socket on the Rear Panel Side.

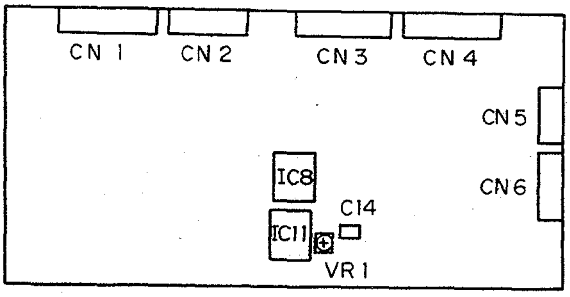


Fig. 6-2. Adjusting Point of the DSP Ass'y

6. REGLAGES

6.1 Objectifs et points de réglage

- Objectifs: Correction de l'ensemble DSP (AXY1017)
- Points: VR1 située sur l'ensemble DSP

6.2 Procédure de réglage

Note: Effectuer les réglages seulement sur l'amplificateur-mélangeur Hi-Fi.

(1) Mettre l'appareil en mode essais.

① Relier les broches n° 4 (♯1) et n° 2 (♭1) respectivement aux broches n° 13 (GND) et n° 10 (GND) de la prise DIN pour la tablette de télécommande (ensemble VIDEO DN901), par l'intermédiaire d'une résistance de 5,6 kΩ (voir la fig. 6-1).

② Enclencher l'interrupteur d'alimentation.

③ Vérifier que l'appareil est entré dans le mode essais.

<Vérification du mode essai>

En mode essais, il est possible de sélectionner manuellement les sources d'entrée musicale. Vérifier que "la source d'entrée passe" d'une à l'autre selon la position du sélecteur de "mode d'écho DSP situé" sur le panneau frontal, en regardant le témoin lumineux de sélection automatique d'entrées.

Touches utilisables	Sources d'entrée correspondantes
A	LASER DISC
B	VCR
C	TAPE/AUX
D	CABLE

(2) Mettre l'appareil en mode d'affichage de correction.

① Aprés que plus de 20 secondes se sont écoulées en mode essais, appuyer sur la touche "♯3" de la tablette de télécommande.

(3) Régler VR1.

① Regarder les témoins de contrôle de touches ("♭5" - "♭1", "♮", "♯1" - "♯5") et ajuster VR1 de l'ensemble DSP de manière à ce que le témoin "♭5" change sa couleur d'ambre à rouge (voir la fig. 6-2).

(4) Annuler le mode essais.

① Couper l'alimentation.

② Déconnecter les deux résistances de la prise DIN pour tablette de télécommande.

③ Réenclencher l'alimentation.
Le mode essais est alors annulé.

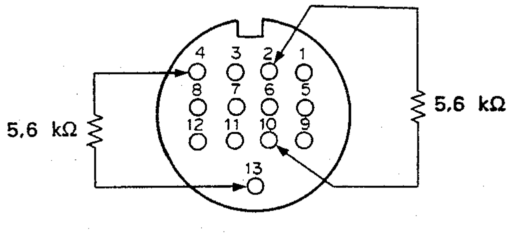


Fig. 6-1. Prise DIN sur le panneau arriére (Esemble VIDEO DN901)

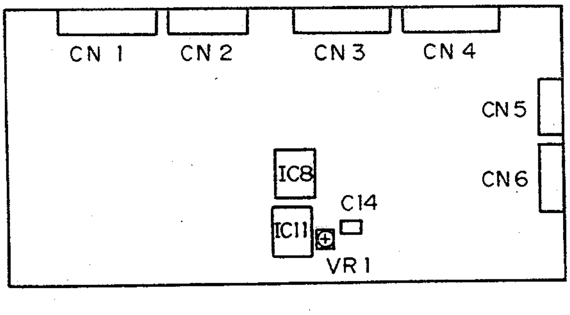


Fig. 6-2. Points de réglage de l'ensemble DSP

6. AJUSTES

6.1 Artículos de ajuste y punto de ajuste

- Artículos de ajuste: Ajuste de descentramiento del conjunto de DSP (AXY1017)
- Punto de ajuste: VR1 del conjunto de DSP

6.2 Procedimiento de ajuste

Nota: Al efectuar este ajuste, realícelo para el amplificador mezclador estereofónico solamente.

(1) Puesta en el modo de prueba

① Conecte la patita Nº 4 (♯1) y la patital Nº 13 (GND), así como también la patita Nº 2 (♭1) y la patita Nº 10 (GND) del receptáculo DIN (DN901 del conjunto de VIDEO) para el control remoto del controlador de llave con el resistor de 5,6 kΩ respectivamente (ver la Figura 6-1.)

② Ponga en ON la fuente de alimentación.

③ Confirme que ya está en el modo de prueba.

<Confirmación del modo de prueba>
En el modo de prueba se puede efectuar manualmente la comunicación de la función de la entrada de música. *Confirme en el "indicador de conmutación automática de entrada" que la posición de entrada se puede conmutar* por la pulsación del "botón de conmutación del modo de eco de D.S.P" que está en la parte frontal.

Botón a usar	Función que se selecciona
A	LASER DISC
B	VCR
C	TAPE/AUX
D	CABLE

(2) Puesta en el modo de indicación de descentramiento

① *Transcurridos 20 minutos en el modo de prueba, pulse el botón de control de llave ♯3. Con esta operación, entrará* en el modo de indicación de descentramiento.

(3) Ajuste de VR1

① Observando el indicador de control de llave ("♭5" - "♭1", "♮", "♯1" - "♯5"), ajuste VR1 del conjunto de DSP (ver la Figura 6-2.) de tal manera que el color del indicador "♭5" se cambie del ámber a rojo.

(4) Liberación del modo de prueba

① Desconecte la alimentación.

② Retire los 2 resistores conectados al receptáculo DIN para el control remoto del controlador de llave.

③ Vuelva a activar la alimentación. Con estas operaciones, se liberará el modo de prueba.

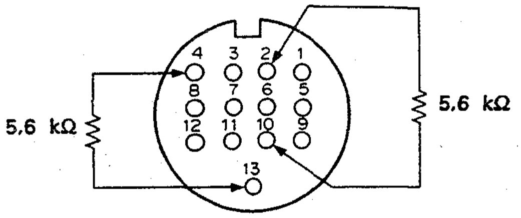


Fig. 6-1. Receptáculo DIN en el panel trasero (DN901 del conjunto de VIDEO)

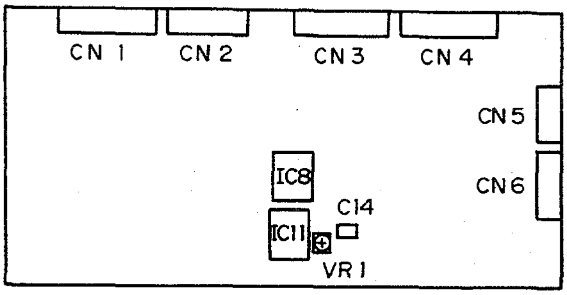


Fig. 6-2. Punto de ajuste del conjunto de DSP

7. IC INFORMATION

7.1 AZC1575 (DSP Ass'y: IC15)

- 4-bit Microcomputer (80 pins)

(1) Microcomputer Peripheral Interface

The operation of the microcomputer is as follows:

- To read the key and remote control signals.
- To control switch and volume.
- To display the LED.
- To transfer the data to DSP.

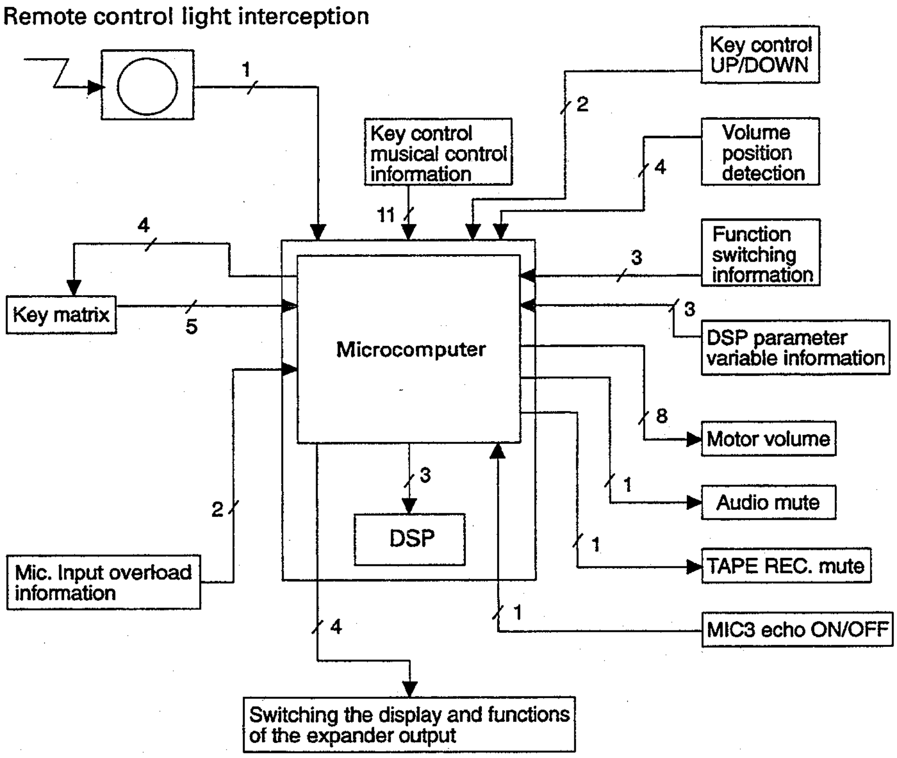
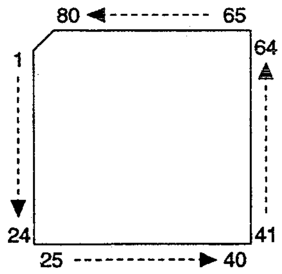

Remote control light interception
1
Key control UP/DOWN
2
Key control musical control information
11
Volume position detection
4
Function switching information
3
4
Key matrix
5
Microcomputer
DSP parameter variable information
3
8
Motor volume
3
DSP
1
Audio mute
2
Mic. Input overload information
1
TAPE REC. mute
4
1
MIC3 echo ON/OFF
Switching the display and functions of the expander output

Fig. 7-1 Peripheral Connection

(2) Pin Assignment (Top View)


80
65
1
64
24
41
25
40

(3) Pin Function

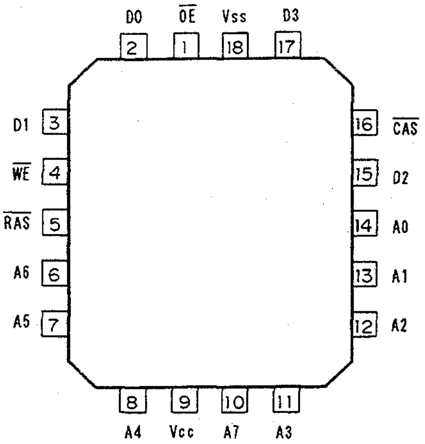
Pin No.	Pin Name	Signal Name	I/O	Pin Function		Back-up Condition	Active
1	AN0	VIK1	I	Detects and inputs the main volume position.		High-Z	DC 0–5V
2	AV$_{REF}$	–	I	Inputs reference voltage of the A/D converter.		–	–
3	V$_{DD}$	–	–	+ voltage impressing pin		–	–
4	V$_{DD}$	–	–				
5	P113	MV4	O	4-bit input/ output port (Port 11)	Echo motor volume control (Down)	L	H
6	P112	MV3	O		Echo motor volume control (Up)	L	H
7	P111	MV2	O		Main motor volume control (Down)	L	H
8	P110	MV1	O		Main motor volume control (Up)	L	H
9	P103	–	–	4-bit input/ output port (Port 10)	4-bit input/output port (Not used, Open)	–	–
10	P102	TRM	O		Tape recording pin mute output	L	L
11	P101	AMU	O		Adapter output, stereo and mono audio output pin mute output	L	L
12	P100	KS05	O		Key scan output	L	L
13	P93	–	–	4-bit input/ output port (Port 9)	4-bit input/output port (Not used, connect to GND)	–	–
14	P92	FKI3	I		Function switching (TAPE/AUX)	High-Z	L
15	P91	FKI2	I		Function switching (VCR)	High-Z	L
16	P90	FKI1	I		Function switching (LASERDISC)	High-Z	L
17	P83	KSI4	I	4-bit input/ output port (Port 8)	Key scan input	High-Z	L
18	P82	KSI3					
19	P81	KSI2					
20	P80	KSI1					
21	P73	KS04	O	4-bit input/ output port (Port 7)	Key scan output	L	L
22	P72	KS03					
23	P71	KS02					
24	P70	KS01					
25	P63	CE1	O	4-bit input/ output port (Port 6)	Expander 2 chip enable output	L	H
26	P62	CE0	O		Expander 1 chip enable output	L	H
27	P61	CLK	O		Expander clock output	L	H
28	P60	DT	O		Expander data output	L	H
29	P53	PD7	I/O	4-bit input/ output port (Port 5)	DSP data pin	–	–
30	P52	PD6					
31	P51	PD5					
32	P50	PD4					
33	Vss	–	–	GND potential pin		–	–
34	P43	PD3	O	4-bit input/ output port (Port 4)	DSP data pin		
35	P42	PD2					
36	P41	PD1					
37	P40	PD0					
38	P33	–	–	Program-mable 4-bit input/output port (Port 3)	(Not used, open)	–	–
39	P32	PAL	O		IC17 latch enable signal output	–	–
40	P31	PA9	O		DSP address pin	–	–
41	P30	PA8					
42	P23	–	–	4-bit input/ output port (Port 2)	(Not used, open)	–	–
43	P22	CC1	O		Data writing asking output to DSP	–	–
44	P21	–	–		(Not used, open)	–	–
45	P20	CC0	O		DSP chip select output	–	–

Pin No.	Pin Name	Signal Name	I/O	Pin Function		Back-up Condition	Active
46	P13	–	–	4-bit input/ output port (Port 1)	External event pulse input pin for timer/event counter (Not used, connect to GND)	–	–
47	P12	MIC3	I		Echo ON/OFF detection	–	H
48	INT1 (P11)	ACK	I		AC detection	High-Z	–
49	INT0 (P10)	REM	I		Remote control signal (serial data) input	High-Z	–
50	$\overline{\text{SB1}}$ (P03)	–	I/O	4-bit input/ output port (Port 0)	Serial data input pin. Serial bus input/output pin	–	–
51	SB0 (P02)	–	–		Serial data output pin. Serial bus input/output pin (Not used, open)	–	–
52	$\overline{\text{SCK0}}$ (P01)	–	I/O		Serial clock input/output pin	–	–
53	P00	DETM	I		Model detection	High-Z	L: Lower model
54	Vss	–	–	GND potential pin		–	–
55	XT1	–	I	Crystal connection pin for subsystem clock oscillation	GND	–	–
56	XT2	–	–	(Not used)	OPEN		
57	IC	–	–	(Not used, connect to GND)		–	–
58	X1	–	I	Crystal connection pin for main system clock oscillation (Not used)		–	–
59	X2	–	–			–	–
60	$\overline{\text{RESET}}$	–	I	System reset input pin		–	–
61	P143	LATCH	O	4-bit input/ output port (Port 14)	D/A converter (LC7883M) attenuating data latching output	–	–
62	P142	INTB	O		D/A converter (LC7883M) initializing signal output	–	–
63	P141	MUSIC BYPASS	O		IC7 (NJU4053BM) control output	–	–
64	P140	EXPROG	I		Expander data pin	High-Z	–
65	P133	EXD3	I	4-bit input/ output port (Port 13)	Expander data pin	High-Z	–
66	P132	EXD2					
67	P131	EXD1					
68	P130	EXD0					
69	P123	MV8	O	4-bit input/ output port (Port 12)	MIC 2 motor volume control (Down)	L	H
70	P122	MV7			MIC 2 motor volume control (Up)	L	H
71	P121	MV6			MIC 1 motor volume control (Down)	L	H
72	P120	MV5			MIC 1 motor volume control (Up)	L	H
73	AVss	–	–	Reference GND pin for A/D converter		–	–
74	P153 (AN7)	–	I	4-bit input/ output port (Port 15)	Analog input pin for A/D converter (Not used, pull up to +5V)	–	–
75	AN6	DPZ3			DSP parameter variable information (repeat time)	High-Z	DC 0-5V
76	AN5	DPZ2			DSP parameter variable information (delay time)	High-Z	DC 0-5V
77	AN4	DPZ1			DSP parameter variable information (reverb time)	High-Z	DC 0-5V
78	AN3	VIK4	I	MIC 2 volume position detection input		High-Z	DC 0-5V
79	AN2	VIK3	I	MIC 1 volume position detection input		High-Z	DC 0-5V
80	AN1	VIK2	I	ECHO volume position detection input		High-Z	DC 0-5V

7.2 AZC1574 (DSP Ass'y: IC4, IC5, IC6)

- 64k x 4 bit Dynamic RAM

(1) Pin Assignment (Top View)


D0
$\overline{OE}$
Vss
D3
2
1
18
17
D1
3
$\overline{WE}$
4
$\overline{RAS}$
5
A6
6
A5
7
16
$\overline{CAS}$
15
D2
14
A0
13
A1
12
A2
8
9
10
11
A4
Vcc
A7
A3

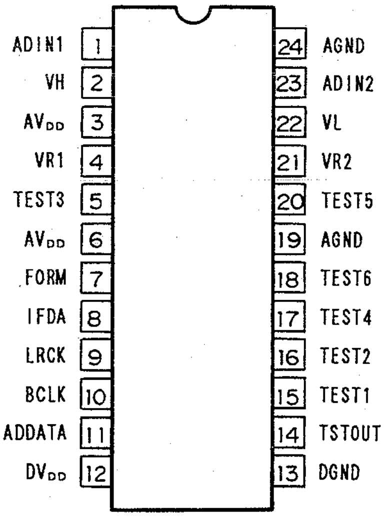
(2) Pin Function

Pin No.	Pin Name	I/O	Pin Function	Active
1	$\overline{OE}$	I	Output enable	L
2	D0	I/O	Data input/output	–
3	D1			
4	$\overline{WE}$	I	Write enable	H: Read L: Write
5	$\overline{RAS}$	I	Low address strobe	L
6	A6	I	Address input	–
7	A5			
8	A4			
9	Vcc	I	Power source (+5V)	–
10	A7	I	Address input	–
11	A3			
12	A2			
13	A1			
14	A0			
15	D2	I/O	Data input/output	–
16	$\overline{CAS}$	I	Column address strobe	L
17	D3	I/O	Data input/output	–
18	Vss	I	GND	–

7.3 LC7886M (DSP Ass'y: IC8, IC11)

- 16 (/18) Bit A/D Converter

(1) Pin Assignment (Top View)


ADIN1 1
VH 2
AV_{DD} 3
VR1 4
TEST3 5
AV_{DD} 6
FORM 7
IFDA 8
LRCK 9
BCLK 10
ADDATA 11
DV_{DD} 12
24 AGND
23 ADIN2
22 VL
21 VR2
20 TEST5
19 AGND
18 TEST6
17 TEST4
16 TEST2
15 TEST1
14 TSTOUT
13 DGND

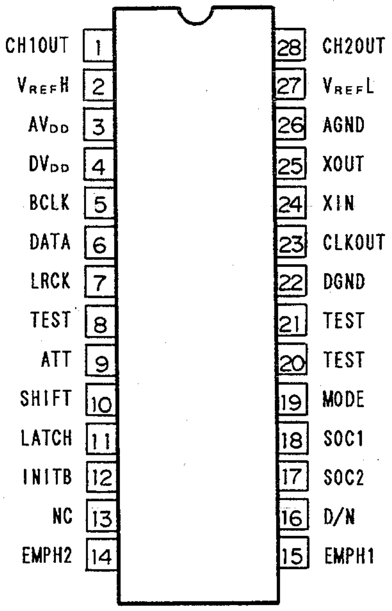
(2) Pin Function

Pin No.	Pin Name	I/O	Pin Function
1	ADIN1	I	CH1 analog input
2	VH	I	Reference voltage "H" input
3	AV_{DD}	–	Analog power source voltage pin
4	VR1	–	CH1 (VH+VL)/2 reference voltage output (Not used, open)
5	TEST3	I	Test pin. Usually connected to analog GND.
6	AV_{DD}	–	Analog power source voltage pin
7	FROM	I	1) FROM = "H" level When LRCK = "L" level, CH1 When LRCK = "H" level, CH2 2) FROM = "L" level When LRCK = "H" level, CH1 When LRCK = "L" level, CH2
8	IFDA	I	When IFDA = "L" level, the digital data is compatible with 16 bits. (When IFDA = "H" level, the digital data is compatible with 18 bits.)
9	LRCK	I	Designates CH1 and CH2 of the output digital data (ADDATA) (Refer to pin 7.).
10	BCLK	I	Bit clock pin. The clock to output the digital data to the bit serial.
11	ADDATA	O	Output in the bit serial from the MSB side.
12	DV_{DD}	–	Digital power source voltage pin
13	DGND	–	Digital GND pin
14	TSTOUT	I/O	Test pin. Usually connected to the digital GND.
15	TEST1	I	
16	TEST2		
17	TEST4		
18	TEST6		
19	AGND	–	Analog GND pin
20	TEST5	I	Test pin. Usually connected to the digital GND.
21	VR2	O	CH2 (VH+VL)/2 reference voltage output pin (Not used, open)
22	VL	I	Reference voltage "L" input pin
23	ADIN2	I	CH2 analog input pin
24	AGND	–	Analog GND pin

7.4 LC7883KM (DSP Ass'y IC12, IC13)

- 16-bit D/A Converter with Built-in Octuple Over Sampling Digital Filter

(1) Pin Assignment (Top View)


CH1OUT 1
$V_{REF}H$ 2
AV_{DD} 3
DV_{DD} 4
BCLK 5
DATA 6
LRCK 7
TEST 8
ATT 9
SHIFT 10
LATCH 11
INITB 12
NC 13
EMPH2 14
28 CH2OUT
27 $V_{REF}L$
26 AGND
25 XOUT
24 XIN
23 CLKOUT
22 DGND
21 TEST
20 TEST
19 MODE
18 SOC1
17 SOC2
16 D/N
15 EMPH1

Note 1: By setting the MODE pin, the following modes can be selected.

<When the MODE pin is "H">
In the condition of EMPH1, EMPH2 and D/N pins, de-emphasis, standard/ double speed modes can be set.

When the MODE pin is "H" (pin setting mode)

EMPH1	EMPH2	De-emphasis
L	L	OFF
L	H	For Fs=32KHz
H	L	For Fs=44.1KHz
H	H	For Fs=48KHz

* D/N pin: "H" = Double speed, "L" = Standard speed

* Fix the ATT, SHIFT and LATCH pins at "L".

<When the MODE pin is "L">
The mode turns into the serial data transfer mode from the ATT pin.
Fix the EMPH1, EMPH2 and D/N pins at "L".
This product is fixed at this mode.

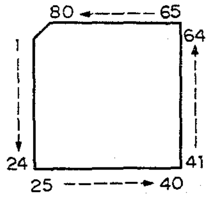
(2) Pin Function

Pin No.	Pin Name	I/O	Pin Function
1	CH1OUT	O	DAC CH1 output
2	$V_{REF}H$	I	Reference voltage "H" input pin
3	AV_{DD}	–	Analog power source pin
4	DV_{DD}	–	Digital power source pin
5	BCLK	I	Bit clock input pin
6	DATA	I	Digital audio data input pin. Input with the bit serial from the MSB side.
7	LRCK	I	LR clock input pin When LRCK = "H", CH1 When LRCK = "L", CH2
8	TEST	I	Test pin (usually "L")
9	ATT	I	Attenuating data input pin. Input with the bit serial from the LSB side.
10	SHIFT	I	Attenuating data transfer clock input pin
11	LATCH	I	Attenuating data latching clock input pin
12	INITB	I	Initializing signal input pin. (Usually "H")
13	NC	–	Fixed at "H" or "L".
14	EMPH2	I	De-emphasis setting pin (Refer to Note 1)
15	EMPH1	I	
16	D/N	I	Double speed/standard speed switching pin "H": Double speed "L": standard speed
17	SOC2	I	Input source selector pin
18	SOC1	I	
19	MODE	I	Operation mode setting pin (Refer to Note1)
20	TEST	I	Test pin (Usually "L")
21	TEST	I	
22	DGND	–	Digital GND pin
23	CLKOUT	O	Clock output pin (Not used, open)
24	XIN	I	Crystal oscillator input pin
25	XOUT	O	Crystal oscillator output pin
26	AGND	–	Analog GND pin
27	$V_{REF}L$	I	Reference voltage "L" input pin
28	CH2OUT	O	DAC CH2 output

7.5 ZFX-1A (DSP Ass'y: IC9)

- Digital Signal Processor for Audio

(1) Pin Assignment (Top View)



(2) Pin Function

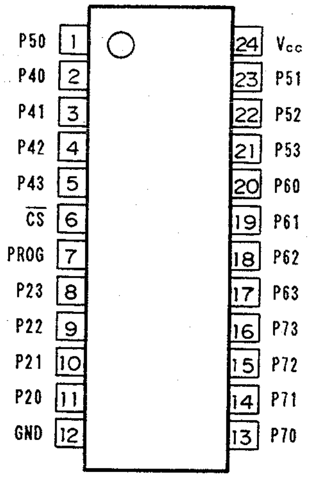
Pin No.	Pin Name	I/O	Pin Function	Active
1	Vss	–	GND pin	–
2	$\overline{\text{RAS}}$	O	DRAM RAS output for data storage	L
3	CAS	O	DRAM CAS output for data storage	L
4	$\overline{\text{MWE}}$	O	DRAM write control signal for data storage	L
5	NC	–	(Not used, open)	–
6	NC			
7	VDD	–	+5V power source pin	–
8	MD0	I/O	DRAM data input/output for data storage	–
9	MD1			
10	MD2			
11	MD3			
12	MD4			
13	MD5			
14	MD9			
15	MD8			
16	MD7			
17	MD6			
18	Vss	–	GND pin	–
19	CD0	I/O	Data input/output with CPU	–
20	CD1			
21	CD2			
22	CD3			
23	CD4			
24	CD5			
25	CD6			
26	CD7			
27	VDD	–	+5V power source pin	–
28	$\overline{\text{RESET}}$	I	System reset pin. Required for more than three system clocks.	L
29	BCI	I	Bit clock input from the external digital equipment	–
30	SYNCI	I	Input of the synchronizing signals (1fs) at the head of each cycle (at slave) (Not used, connected to GND)	–
31	TEST	I	For test (Not used, connected to GND)	–
32	Vss	–	GND pin	–
33	CA0	I	Address signal input from CPU	–
34	CA1			
35	CA2			
36	CA3			

Pin No.	Pin Name	I/O	Pin Function	Active
37	CA4	I	Address signal input from CPU	–
38	CA5			
39	CA6			
40	CA7			
41	CA8			
42	CA9			
43	WDCI	I	Word clock input from the external digital equipment	–
44	SDI0	I	Serial data input	–
45	CCE	I	Chip select signal input from CPU	L
46	COE	I	Data read asking signal input from CPU	L
47	V_{SS}	–	GND pin	–
48	CWE	I	Data write asking signal input from CPU	L
49	NC	–	(Not used, open)	–
50	SD01	O	Serial data output	–
51	SD00			
52	BC0	O	Bit clock output to the external digital equipment	–
53	WDC0	O	Read clock output to the external digital equipment	–
54	SYNC0	O	Output of the synchronizing signal (1fs) at the head of each cycle (at master)	–
55	EC01	O	Synchronizing clock output to the external digital equipment	–
56	EC00	O	Synchronizing clock output to the external digital equipment (Not used, open)	–
57	V_{DD}	–	+5V power source pin	–
58	MODE1	I	System synchronizing weight selection	H:System synchronizing weight is existing. L: System synchronizing weight is not existing.
59	SCI	I	System clock input	–
60	X1	O	Crystal oscillator connecting pin	–
61	MODE0	I	CPU Mode/ROM mode switching (Set to the CPU mode)	H:CPU mode L: ROM mode
62	X0	I	Crystal oscillator connecting pin	–
63	V_{SS}	–	GND pin	–
64	NC	–	(Not used, open)	–
65	NC			
66	NC			
67	NC			
68	NC			
69	V_{DD}	–	+5V power source pin	–
70	SDI1	I	Serial data input	–
71	MODE2	I	DRAM access mode (Twice/four times switching)	H:Twice access mode L: Four times access mode
72	MA0	O	DRAM address output for data storage	–
73	MA1			
74	MA2			
75	MA3			
76	MA4			
77	MA5			
78	MA6			
79	MA7			
80	MA8	O	DRAM address output for data storage (not used, open)	–

7.6 MSM82C43GS (DSP Ass'y: IC19)

- Input/Output Port Expander

(1) Pin Assignment (Top View)


P50 1
P40 2
P41 3
P42 4
P43 5
$\overline{CS}$ 6
PROG 7
P23 8
P22 9
P21 10
P20 11
GND 12
24 Vcc
23 P51
22 P52
21 P53
20 P60
19 P61
18 P62
17 P63
16 P73
15 P72
14 P71
13 P70

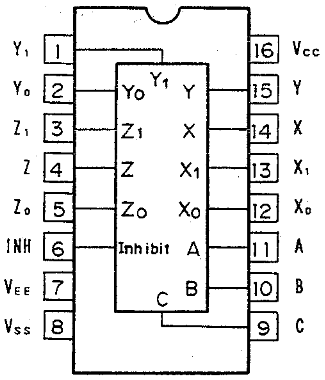
(2) Pin Function

Pin No.	Pin Name	I/O	Pin Function	Active
21	P53	I/O	The 4-bit bi-directional I/O ports, respectively. At output to the port, the data is latched to static. At input, the data is enabled only when the PROG is "L".	–
22	P52			
23	P51			
1	P50			
2	P40	I/O	The 4-bit bi-directional I/O ports, respectively. At output to the port, the data is latched to static. At input, the data is enabled only when the PROG is "L".	–
3	P41			
4	P42			
5	P43			
6	$\overline{CS}$	I	Input for chip select. When $\overline{CS}$ is "H", the output and internal status cannot be changed.	L
7	PROG	I	Clock input from microcomputer IC15. When PROG turns from "H" to "L", the address is decorded, enabling the data access.	L
8	P23	I/O	The 4-bit bi-directional I/O ports, respectively. At output to the port, the data is latched to static. At input, the data is enabled only when the PROG is "L".	–
9	P22			
10	P21			
11	P20			
12	GND	–	GND pin	–
13	P70	I/O	The 4-bit bi-directional I/O ports, respectively. At output to the port, the data is latched to static. At input, the data is enabled only when the PROG is "L".	–
14	P71			
15	P72			
16	P73			
17	P63	I/O	The 4-bit bi-directional I/O ports, respectively. At output to the port, the data is latched to static. At input, the data is enabled only when the PROG is "L".	–
18	P62			
19	P61			
20	P60			
24	Vcc	–	+5V power source	–

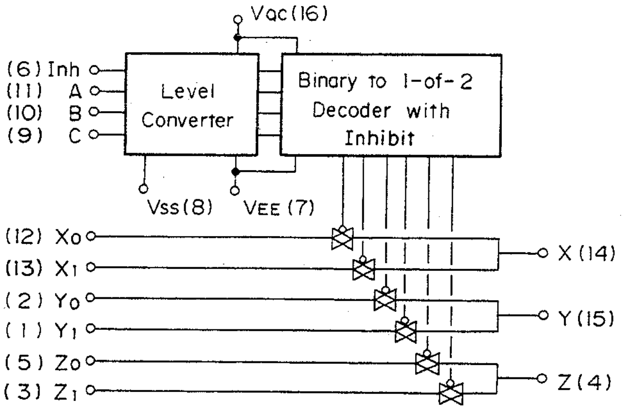
7.7 NJU4053BM (DSP Ass'y: IC7)

- 2-channel Analog Multiplexer

(1) Pin Assignment (Top View)


Y1 1
Y0 2
Z1 3
Z 4
Z0 5
INH 6
VEE 7
VSS 8
9 C
10 B
11 A
12 X0
13 X1
14 X
15 Y
16 Vcc
Y0 Y1 Y
Z1 X
Z X1
Z0 X0
Inhibit A
C B

(2) Block Diagram


Vac(16)
(6) Inh
(11) A
(10) B
(9) C
Level Converter
Binary to 1-of-2 Decoder with Inhibit
Vss(8)
VEE(7)
(12) X0
(13) X1
(2) Y0
(1) Y1
(5) Z0
(3) Z1
X(14)
Y(15)
Z(4)

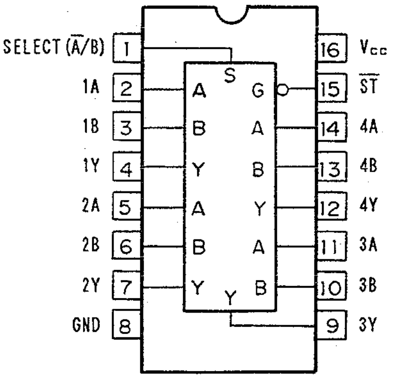
(3) Truth Table

Control Input				ON Switch		
INH (Inhibit)	SELECT					
	C	B	A			
L	L	L	L	Z_0	Y_0	X_0
L	L	L	H	Z_0	Y_0	X_1
L	L	H	L	Z_0	Y_1	X_0
L	L	H	H	Z_0	Y_1	X_1
L	H	L	L	Z_1	Y_0	X_0
L	H	L	H	Z_1	Y_0	X_1
L	H	H	L	Z_1	Y_1	X_0
L	H	H	H	Z_1	Y_1	X_1
H	×	×	×	—		

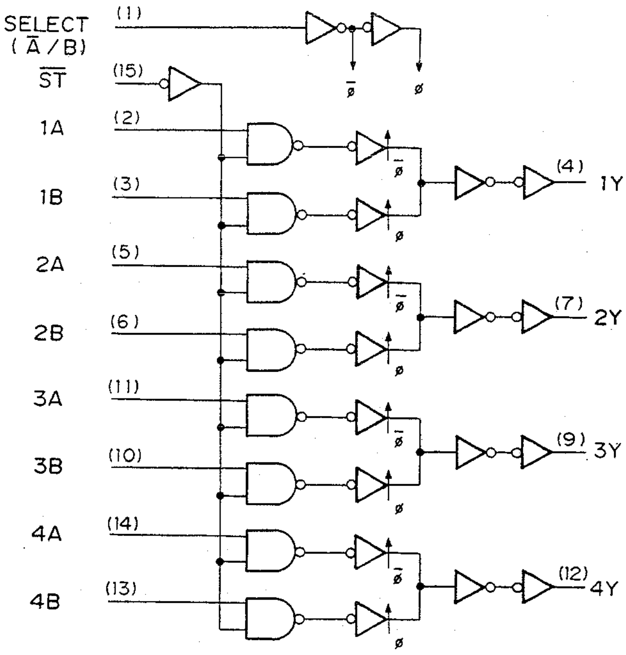
7.8 TC74AC157AF (DSP Ass'y: IC3)

- 2-way Input Digital Multiplexer

(1) Pin Assignment (Top View)


SELECT (Ā/B) 1
1A 2
1B 3
1Y 4
2A 5
2B 6
2Y 7
GND 8
9 3Y
10 3B
11 3A
12 4Y
13 4B
14 4A
15 ST̄
16 Vcc
S G
A A
B B
Y Y
A A
B B
Y Y

(2) Block Diagram


SELECT (Ā/B)
ST̄
1A
1B
2A
2B
3A
3B
4A
4B
(1)
(15)
(2)
(3)
(5)
(6)
(11)
(10)
(14)
(13)
ø̄
ø
(4) 1Y
(7) 2Y
(9) 3Y
(12) 4Y

(3) Truth Table

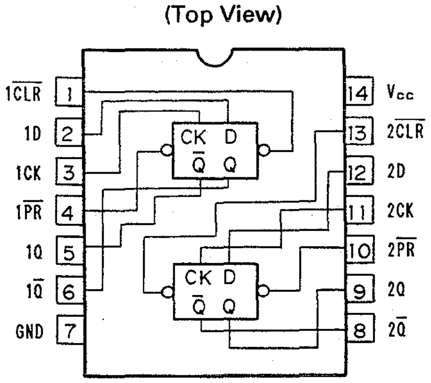
INPUT				OUTPUT
$\overline{ST}$	SELECT ($\overline{A}$/B)	A	B	Y
H	×	×	×	L
L	L	L	×	L
L	L	H	×	H
L	H	×	L	L
L	H	×	H	H

×: Don't Care

7.9 TC74AC74AF (DSP Ass'y: IC2)

● Dual D-type Flip Flop

(1) Pin Assignment, Block Diagram


(Top View)
1CLR 1
1D 2
1CK 3
1PR 4
1Q 5
1Q̄ 6
GND 7
14 Vcc
13 2CLR
12 2D
11 2CK
10 2PR
9 2Q
8 2Q̄
CK D
Q̄ Q
CK D
Q̄ Q

(2) Truth Table

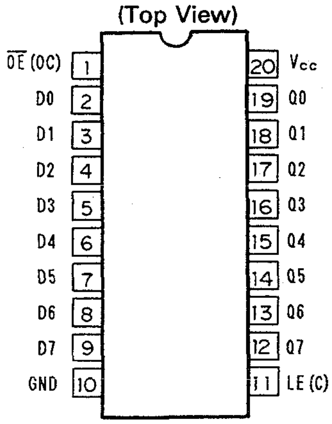
INPUT				OUTPUT		FUNCTION
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	×	×	L	H	CLEAR
H	L	×	×	H	L	PRESET
L	L	×	×	H	H	—
H	H	L	↑	L	H	—
H	H	H	↑	H	L	—
H	H	×	↓	Qn	$\overline{Qn}$	NO CHANGE

×: Don't Care

7.10 TC74HC573AF (DSP Ass'y: IC17)

● 8-bit Latch (Non-reversed)

(1) Pin Assignment

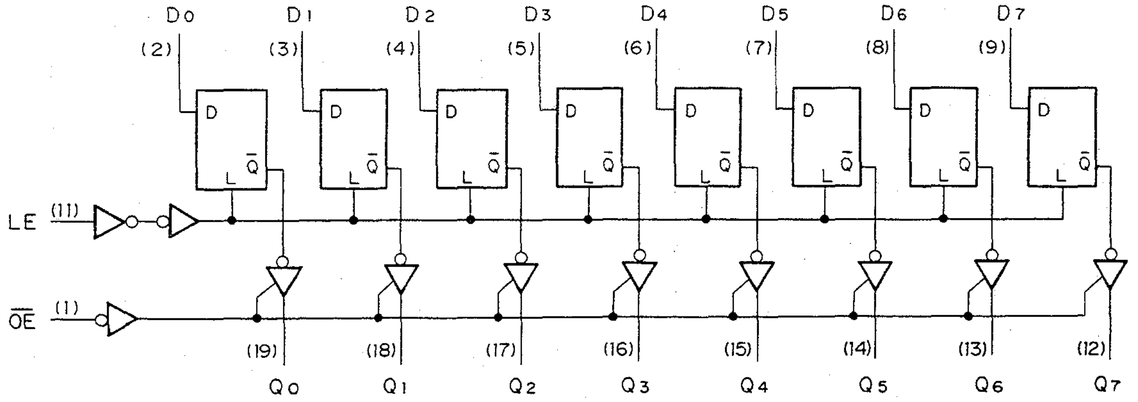

(Top View)
OE (OC) 1
D0 2
D1 3
D2 4
D3 5
D4 6
D5 7
D6 8
D7 9
GND 10
20 Vcc
19 Q0
18 Q1
17 Q2
16 Q3
15 Q4
14 Q5
13 Q6
12 Q7
11 LE (C)

(2) Truth Table

INPUT			OUTPUT
$\overline{OE}$	LE	D	Q
H	×	×	Z
L	L	×	Qn
L	H	L	L
L	H	H	H

X: Don't care
Z: High impedance
Qn: The level of Q output before LE becomes L.

(3) Block Diagram


D0 (2)
D1 (3)
D2 (4)
D3 (5)
D4 (6)
D5 (7)
D6 (8)
D7 (9)
D
L
Q̄
LE (11)
OE (1)
(19) Q0
(18) Q1
(17) Q2
(16) Q3
(15) Q4
(14) Q5
(13) Q6
(12) Q7

8. FOR SEZ TYPE

NOTES:

- *Part without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

CONTRAST OF MISCELLANEOUS PARTS

- The SA-V240/SEZ type is the same as the SA-V240/KUC type with the exception of the following sections.

Mark	Symbol & Description	Parts No.		Remarks
		SA-V240/KUC	SA-V240/SEZ	
	FRONT Ass'y	AWZ3454	AWZ3957	
	VOL Ass'y	AWZ3457	AWZ3958	
	SP Ass'y	AWZ3460	AWZ3970	
	TONE Ass'y	AWZ3558	AWZ3956	
	SELECT Ass'y	AWZ3461	AWZ3959	
	REAR Ass'y	AWZ3462	AWZ3960	
⚠	T1 POWER TRANSFORMER	ATS1365	ATS1366	
⚠	AC SOCKET 3-P	AKP-515	....	
⚠	VOLTAGE SELECTOR (AC110-115,120-127, 220-230, 240V)	....	AKX-507	Attach to a rear panel
⚠	AC POWER CORD	ADG1058	ADG1049	
⚠	AC CORD STOPPER	AEP-113	AEC-882	
⚠	FU1 FUSE (T4A/250V)	....	AEK-514	
⚠	FU2 FUSE (8A/125V)	AEK1002	....	
⚠	FU2 FUSE (T4A/250V)	....	AEK-514	
⚠	FU3, 4 FUSE (1.25A/125V)	AEK-120	....	
⚠	FU3, 4 FUSE (T1.25A/250V)	....	AEK-509	
⚠	FU5 FUSE (2.5A/125V)	AEK-123	....	
⚠	FU5 FUSE (T2.5A/250V)	....	AEK-512	
	PACKING CASE	AHD2135	AHD2189	
	OPERATING INSTRUCTIONS	ARE1209	....	(English)
	OPERATING INSTRUCTIONS	....	ARE1210	(English, French, German, Italian, Spanish)

- VOL Ass'y (AWZ 3958)

The VOL Ass'y (AWZ3958) is the same as the VOL Ass'y (AWZ3457) with the exception of the following sections.

Mark	Symbol & Description	Parts No.		Remarks
		AWZ3457	AWZ3958	
	IC301	UPC4570C	RC4558DXP	
	C302, C306, C311, C331	....	CKDYF473Z50	

- FRONT Ass'y (AWZ3957)

The FRONT Ass'y (AWZ3957) is the same as the FRONT Ass'y (AWZ3454) with the exception of the following sections.

Mark	Symbol & Description	Parts No.		Remarks
		AWZ3454	AWZ3957	
	IC803	UPC4570C	RC4558DXP	

- SP Ass'y (AWZ3970)

The SP Ass'y (AWZ 3970) is the same as the SP Ass'y (AWZ3460) with the exception of the following sections.

Mark	Symbol & Description	Parts No.		Remarks
		AWZ3460	AWZ3970	
	L251, L252	ATH1011	ATH1009	
	R251, R252	RD1/2PMFL100J	RFA1/4L101J	

- TONE Ass'y (AWZ3956)

The TONE Ass'y (AWZ3956) is the same as the TONE Ass'y (AWZ3558) with the exception of the following sections.

Mark	Symbol & Description	Parts No.		Remarks
		AWZ3558	AWZ3956	
	IC401, IC402	UPC4570C	RC4558DXP	

- SELECT Ass'y (AWZ3959)

The SELECT Ass'y (AWZ3959) is the same as the SELECT Ass'y (AWZ3461) with the exception of the following sections.

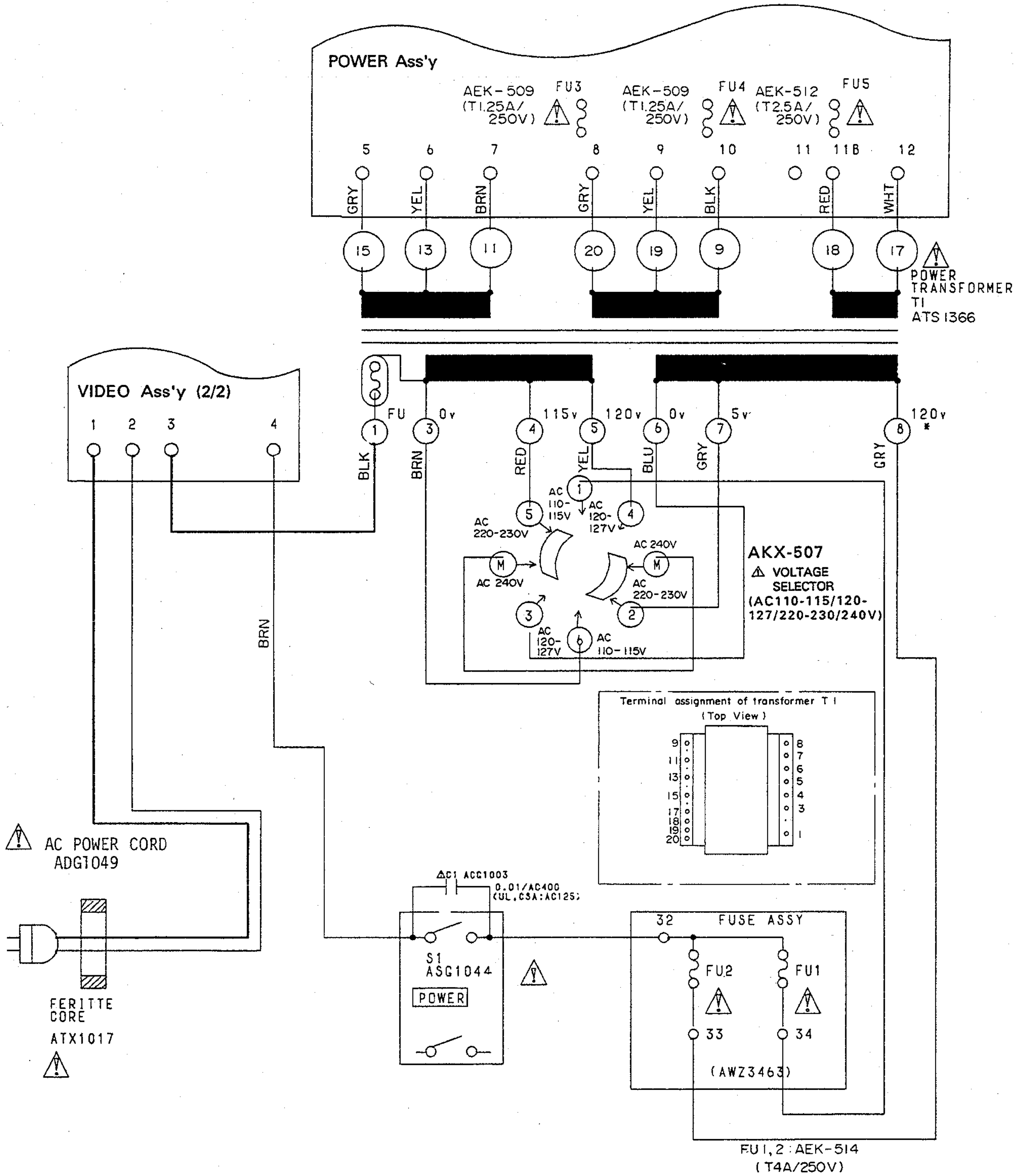
Mark	Symbol & Description	Parts No.		Remarks
		AWZ3462	AWZ3960	
	IC701, IC709, IC710	UPC4570C	RC4558DXP	
	C784, C785	....	CCDSL330J50	
	R1006, R1007	....	RD1/8PM102J	

- REAR Ass'y (AWZ3960)

The REAR Ass'y (AWZ 3960) is the same as the REAR Ass'y (AWZ3462) with the exception of the following sections.

Mark	Symbol & Description	Parts No.		Remarks
		AWZ3462	AWZ3960	
	IC601	RC4558DXP	M5238PF	
	IC602	UPC4570C	RC4558DXP	
	C636, C637	....	CCDSL330J50	
	C638-C641	....	CKDYF473Z50	
	R609, R610, R679, R680	....	RD1/8PM102J	

- The following is the AC power circuit of the SA-V240/SEZ type.


POWER Ass'y
AEK-509 (T1.25A/250V) FU3
AEK-509 (T1.25A/250V) FU4
AEK-512 (T2.5A/250V) FU5
5 6 7 8 9 10 11 11B 12
GRY YEL BRN GRY YEL BLK RED WHT
15 13 11 20 19 9 18 17
POWER TRANSFORMER T1 ATS1366
VIDEO Ass'y (2/2)
1 2 3 4
FU
BLK BRN RED YEL BLU GRY GRY
1 3 4 5 6 7 8
0V 115V 120V 0V 5V 120V
AKX-507
VOLTAGE SELECTOR (AC110-115/120-127/220-230/240V)
AC 110-115V
AC 120-127V
AC 220-230V
AC 240V
M
BRN
Terminal assignment of transformer T1 (Top View)
9 11 13 15 17 18 19 20
8 7 6 5 4 3 1
AC POWER CORD ADG1049
FERITTE CORE ATX1017
AC1 ACG1003 0.01/AC400 (UL,CSA:AC125)
S1 ASG1044
POWER
FUSE ASSY
32 33 34
FU2 FU1
(AWZ3463)
FU1,2 : AEK-514 (T4A/250V)

9. SPECIFICATIONS

9.1 SA-V240/KUC Type

Continuous Average Power Output is 120 Watts* per channel, min., at 4 ohms from 30 Hertz to 20,000 Hertz, with no more than 0.3 % total harmonic distortion.

**Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifiers.*

Continuous power output	
30 Hz ~ 20 kHz, T.H.D. 3 %, 8Ω	100 W + 100 W
Dynamic power (2Ω)	175 W
Total Harmonic Distortion	
(AUX IN, 1 kHz, 60 W, 8Ω)	0.1 %
Input Terminal (Sensitivity/Impedance)	
Audio	
MIC	2.5 mV/25 kΩ
VCR, TAPE/AUX	75 mV/50 kΩ
LASERDISC, CABLE	150 mV/50 kΩ
Video	
LASERDISC, VCR/CAMERA	1 Vp-p/75 Ω
Output Terminal (Output level/Output impedance)	
Audio	
MONITOR L+R, L, R	1 V/2.2 kΩ
TAPE REC L, R	1 V/2.2 kΩ
Video	
MONITOR, VCR/CAMERA	1 Vp-p/75 Ω
Speakers Terminal	
A or B	4 to 16 Ω
A and B	8 to 32 Ω
Frequency Response	
MIC	100 Hz to 20 kHz $^{+0}_{-3}$ dB
LASERDISC, CABLE, VCR, TAPE/AUX	10 Hz to 60 kHz $^{+0}_{-3}$ dB
Tone Control (Music/Mic)	
BASS	$^{+14}_{-12}$ dB/$^{+14}_{-13}$ dB (100 Hz)
TREBLE	$^{+9}_{-12}$ dB/$^{+3}_{-12}$ dB (10 kHz)
Echo delay time/decay time	150 to 300 msec/0 ~ 4 sec
Key Control Range	± 2.5 musical intervals (11 positions)
Signal to Noise Ratio (EIA)	
MIC	74 dB
LASERDISC, CABLE, VCR, TAPE/AUX	74 dB
Power supply, Others	
Power requirements	AC 120 V, 60 Hz
Power consumptions	250 W, 345 VA
AC OUTLETS	
Switched	2 (TOTAL 500 W MAX)
Unswitched	1 (100 W MAX)
Dimensions	420 (W) x 130 (H) x 410 (D) mm 16-9/16 (W) x 5-1/8 (H) 16-1/8 (D) in.
Weight (Without package)	13.0 kg (28 lb 11 oz)
Accessories	
Audio cords	1
Operating instructions	1
Remote control unit	1
Batteries	2

Specifications and design subject to possible modification without notice due to improvement.

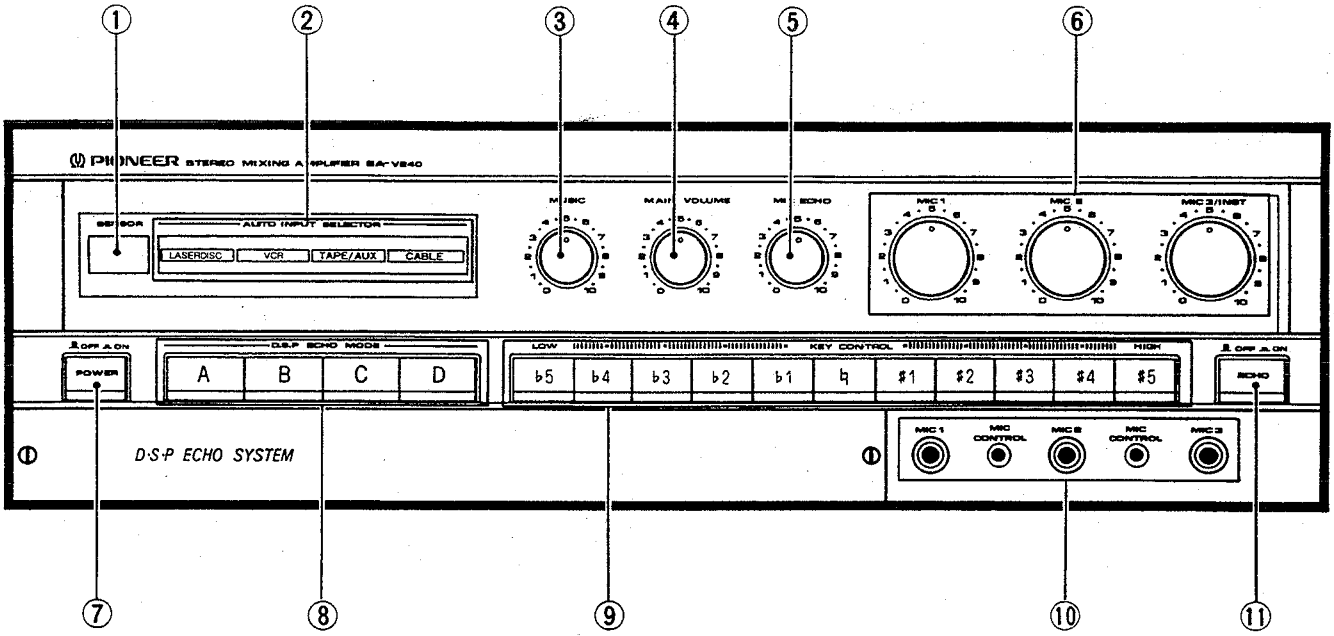
9.2 SA-V240/SEZ Type

Continuous power output	
30 Hz ~ 20 kHz, T.H.D. 3 %, 8Ω	100 W + 100 W
Dynamic power (2Ω)	175 W
Total Harmonic Distortion	
(AUX IN, 1 kHz, 60 W, 8Ω)	0.1 %
Input Terminal (Sensitivity/Impedance)	
Audio	
MIC	2.5 mV/25 kΩ
VCR, TAPE/AUX	75 mV/50 kΩ
LASERDISC, CABLE	150 mV/50 kΩ
Video	
LASERDISC, VCR/CAMERA	1 Vp-p/75 Ω
Output Terminal (Output level/Output impedance)	
Audio	
MONITOR L+R, L, R	1 V/2.2 kΩ
TAPE REC L, R	1 V/2.2 kΩ
Video	
MONITOR, VCR/CAMERA	1 Vp-p/75 Ω
Speakers Terminal	
A or B	4 to 16 Ω
A and B	8 to 32 Ω
Frequency Response	
MIC	100 Hz to 20 kHz $^{+0}_{-3}$ dB
LASERDISC, CABLE, VCR, TAPE/AUX	10 Hz to 60 kHz $^{+0}_{-3}$ dB
Tone Control (Music/Mic)	
BASS	$^{+14}_{-12}$ dB/$^{+14}_{-13}$ dB (100 Hz)
TREBLE	$^{+9}_{-12}$ dB/$^{+3}_{-12}$ dB (10 kHz)
Echo delay time/decay time	150 to 300 msec/0 ~ 4 sec
Key Control Range	± 2.5 musical intervals (11 positions)
Signal to Noise Ratio (DIN, continuous power/50 mW)	
MIC	54 dB/54 dB
LASERDISC, CABLE, VCR, TAPE/AUX	57 dB/60 dB
Power supply, Others	
Power requirements	AC 110/115 — 120/127 — 220/230 — 240 V (switchable), 50/60 Hz
Power consumptions	560 W
Dimensions	420 (W) x 130 (H) x 410 (D) mm
Weight (Without package)	13.0 kg
Accessories	
Audio cords	1
Operating instructions	1
Remote control unit	1
Batteries	2

Specifications and design subject to possible modification without notice due to improvement.

10. PANEL FACILITIES

FRONT PANEL (SA-V240/KUC and SA-V240/SEZ Types)



① REMOTE SENSOR

② AUTO INPUT SELECTOR indicators

This unit automatically slect the input source signals with priority in the order of LASERDISC, VCR, TAPE/AUX, and CABLE. These indicators display the output source accordingly.

③ MUSIC control

Controls the volume of equipments connected to the LASERDISC, VCR, TAPE/AUX and CABLE jacks on the rear panel. Normally, keep the MAIN VOLUME control near the 5 – 7 position and use the MUSIC control to adjust the volume of the music source.

④ MAIN VOLUME control

Controls the volume of the sound from the speakers.

⑤ MIC ECHO control

Controls the echo levels for microphones 1, 2 and 3 simultaneously.

NOTE:
When using a microphone, the original sound itself is processed as well as any effect sound such as an echo, which is added to the original sound.
Therefore, the echo mode will remain activated even when the MIC ECHO control is set to minimum.
When using an effect sound, set the MIC ECHO control to "3" ~ "4."

⑥ MIC volume controls (MIC 1,2 and 3)

To adjust the respective microphones volume level against the music source.
Normally, keep the MAIN VOLUME control near the 5 –7 position and use the MIC controls to adjust the volumes.
MIC 1 and 2 have a function which automatically reduces the sound volume to a proper level when distortion is caused by howling or an excessively loud voice.

⑦ POWER switch (▀ OFF, ▄ ON)

Pressing this switch turns ON the power.
Pressing this switch again turns OFF the power.

⑧ D.S.P. ECHO MODE buttons

Selects desired echo effect from A, B, C or D.

⑨ KEY CONTROL buttons/indicators

Press to change the pitch of the music source.
■ ♮
Changes to the standard pitch.
■ #1 – #5
A maximum raise of five tones above the setting of the standard key is possible in semitone-steps.
■ ♭ 1 – ♭ 5
A maximum decrease of five tones below the setting of the standard key is possible in semitone-steps.

NOTE:
No key change is possible when "CABLE" has been selected by the input selector.

⑩ MIC and MIC CONTROL jacks

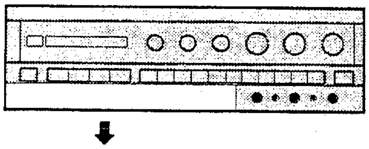
Three microphones can be connected simultaneously.
When using a microphone with key control switch, connect it to MIC 1 or MIC 2 jack. And be sure to connect the control cable to the MIC CONTROL jack.

NOTES:
MIC CONTROL jack
The set position of the key control might change when the control plug is connected to or removed from the MIC CONTROL jack. In such a case, reset to the desired position.

MIC jack
When a microphone is also connected to a MIC INPUT jack on the rear panel, the microphone connected to the front panel has priority. Note that there is no priority order with the key control function.

⑪ MIC 3 ECHO switch (▀ OFF, ▄ ON)

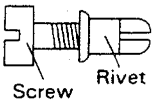
This switch controls only the echo for the microphone 3 input.



Open the front panel door for access.

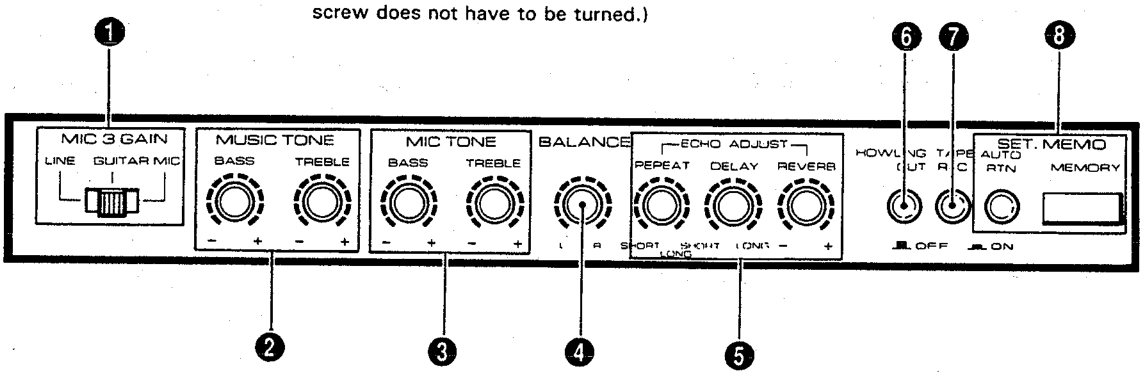
How to open the door:

1. Loosen the screw with a minus screwdriver.
2. Turn the screw until the head comes off. Hold the screw head with pliers and remove the screw and the rivet.
   If only the screw is removed, press the screw in and perform step 2 again.
3. Push the lower portion of the door and open it.



How to close the door:

Close the door. Insert the screw and the rivet into the hole. (The screw does not have to be turned.)



❶ MIC 3 GAIN switch

Choose the mode according to the device connected to the MIC INPUT jack 3.
(Example)

To connect an electronic keyboard	LINE
To connect an electric guitar	GUITAR
To connect a microphone	MIC

NOTE:
Do not set the switch to MIC when using an electronic keyboard or an electric guitar.

❷ MUSIC TONE control (bass/treble)

- Adjusts the tone (bass/treble) of the device connected to the VIDEO DISC, VIDEO, CABLE or TAPE/AUX jack on the rear panel.

❸ MIC TONE control (bass/treble)

Can simultaneously adjust the tone of MIC 1, 2 and 3. Adjusts bass and treble.

❹ BALANCE control

Adjusts the sound balance of both speakers.

❺ ECHO ADJUST control

Varies the echo characteristics of MIC 1, 2 and 3.
REPEAT:
Adjusts the timing of the echo (number of repetitions).
DELAY:
Adjusts the repetition interval of the echo.
REVERB:
Changes the echo volume of the vocal.

❻ HOWLING CUT button

Set this button to ON ▬ to prevent howling.
Depending on the conditions and acoustics of the room, an adequate effect may not be obtained even though the HOWLING CUT button is ON.

❼ TAPE REC button

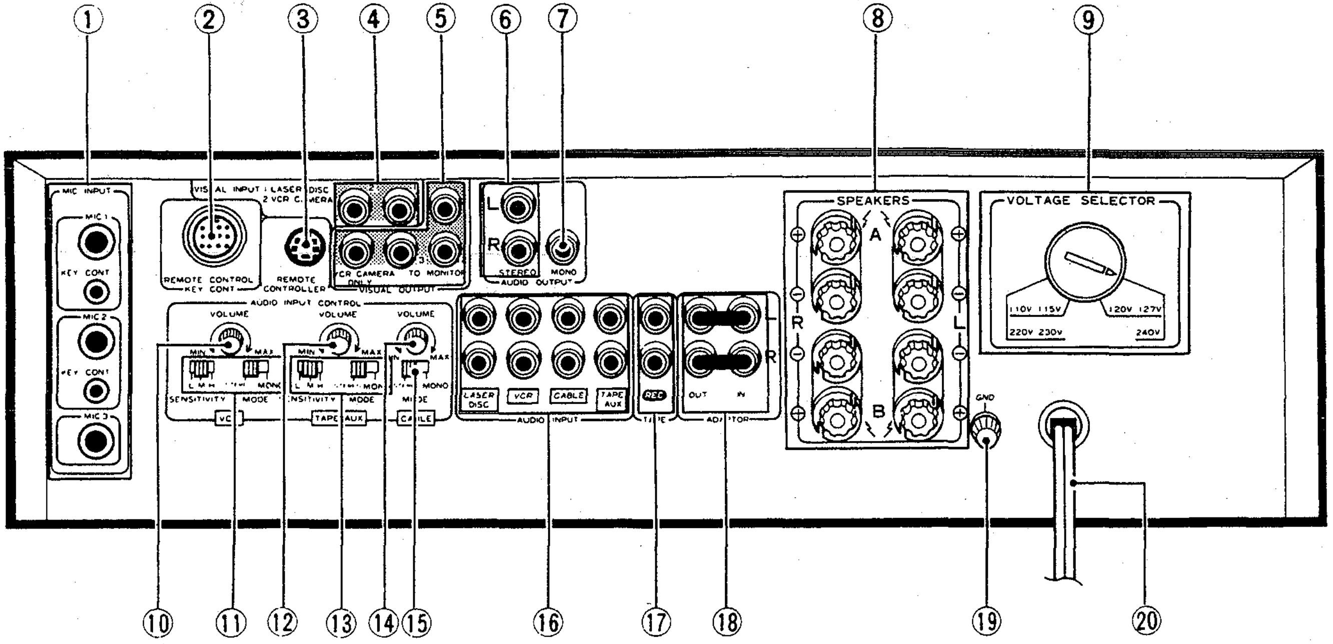
Setting this button to ON allows you to record cable broadcasts. Set the button to OFF when you are not recording cable broadcasting programs.

NOTE:
No tape sound will be output when this button is ON.

❽ SET MEMO button

MEMORY button: Saves data for a desired sound volume for MAIN, MIC, D.S.P. ECHO MODE and ECHO to memory.
To store data, hold the MEMORY button down for several seconds.
The key control button-indicators blink in sequence until the data are stored.
AUTO RTN button: Setting this button to ON allows the system to return to a set sound volume whenever a tune is finished and the MAIN and/or MIC volume has been adjusted.
When the AUTO RTN button is OFF, the system will not return to the state specified in the setting memory. However, the system returns to the specified state regardless of ON or OFF of this button when the power is turned ON.

REAR PANEL (SA-V240/SEZ Type)


①
②
③
④
⑤
⑥
⑦
⑧
⑨
MIC INPUT
MIC 1
KEY CONT
MIC 2
KEY CONT
MIC 3
VISUAL INPUT
LASER DISC
VCR CAMERA
REMOTE CONTROL KEY CONT
REMOTE CONTROLLER
VCR CAMERA ONLY
TO MONITOR
VISUAL OUTPUT
STEREO
MONO
AUDIO OUTPUT
AUDIO INPUT CONTROL
VOLUME
MIN
MAX
SENSITIVITY
MODE
MONO
VCR
TAPE
AUX
CABLE
LASER DISC
VCR
CABLE
TAPE AUX
AUDIO INPUT
REC
TAPE
OUT
IN
ADAPTOR
SPEAKERS
A
B
R
L
GND
VOLTAGE SELECTOR
110V 115V
120V 127V
220V 230V
240V
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑰
⑱
⑲
⑳

① MIC INPUT jacks 1, 2 and 3

Connect the MIC cable(s) of the optional video rack. The MIC INPUT jacks are also used for connection to the optional wireless mic receiver.

When using microphones with key control remote switch connected to MIC 1 and 2, connect the control cords to the KEY CONT jacks.

If a microphone is connected to the MIC jack on the front panel, front input has priority.

NOTE

- *Position of the key controller may change by connecting/disconnecting of the remote plug. In such a case, set it again to the desired position.*
- *For the key control function, both front and rear inputs are effective.*

② REMOTE CONTROL KEY CONT jack

Connect to the remote control terminal of the Pioneer commander capable of controlling the key controller. (Use the controlling cord for key controller supplied with the commander.)

By using the wireless remote controller supplied with the commander, operation of the SA-V240s key controller can be remote-controlled.

③ REMOTE CONTROLLER input jacks

Connect the optional remote control satellite. Installing the satellite on the ceiling or wall allows the remote control unit to function properly even if obstacles exist between the amplifier and the remote control unit. See the instruction manual of the remote control satellite for details of connection.

④ VISUAL INPUT jacks

■ 1 LASERDISC

Connect to the VIDEO OUT jack of the LD player.

■ 2 VCR/CAMERA

Connect to the VIDEO OUTPUT jack of the VCR or TV camera.

⑤ VISUAL OUTPUT jacks

■ 1-3

Jacks for connection to the VIDEO INPUT jacks of TV monitors (maximum three monitors).

■ VCR/CAMERA ONLY

Signals input to the "VCR/CAMERA" VISUAL INPUT jack of the SA-V240 will always be output. By connecting to a TV monitor, you can monitor a VCR or video camera.

⑥ AUDIO OUTPUT jacks (STEREO)

These jacks are used to output the L and R audio signals to the audio input terminals (LASERDISC, VCR, CABLE, TAPE/AUX) of this unit. (excluding MAIN VOLUME and BALANCE controls)

⑦ AUDIO OUTPUT jacks (MONO)

The L and R audio signals input to the audio input jacks (LASERDISC, VCR, CABLE, TAPE/AUX) always appear as L + R monaural.

⑧ SPEAKERS terminals

Two speaker systems (A and B) can be connected.

- Always connect the plus (+) and minus (−) wires of the speakers to the speaker terminals of the same polarity. A polarity error can cause unnatural sound.

⑨ VOLTAGE SELECTOR switch

⑩ VCR VOLUME control

Controls the volume of the VCR input terminals sound.
This control is normally centered but should be adjusted in accordance with the volume of the LASERDISC.

⑪ VCR SOURCE SELECTOR SENSITIVITY switch

Switch it for proper operation of the AUTO SOURCE SELECTOR function of the SA-V240.

M: Normal position

L: (When no LASERDISC signal is input.)
If "TAPE/AUX" or "CABLE" terminal is automatically selected even though VCR is being played, set to this position "L" to select VCR.

H: (When no LASERDISC signal is input.)
If "TAPE/AUX" or "CABLE" is not selected even though VCR finishes its playback, set to this position "H" to select "TAPE/AUX" or "CABLE".

VCR MODE switch

This switch is used to select the VCR audio modes (MONO/STEREO).
Connect a VCR with monophonic audio output either to "L" or "R" AUDIO INPUT jack an set this switch to "MONO".

⑫ TAPE/AUX VOLUME control

Controls the input sound level of devices connected to the TAPE/AUX input terminals. This control is normally centered but should be adjusted for LASERDISC.

⑬ TAPE/AUX SOURCE SELECTOR SENSITIVITY switch

Switch it for proper operation of the AUTO SOURCE SELECTOR function of the SA-V240.

M: Normal position.

L: (When neither LASERDISC nor VCR signal is input.)
If "CABLE" is automatically selected even though "TAPE/AUX" signal is being played, set to this position "L" to select "TAPE/AUX."

H: (When neither LASERDISC nor VCR signal is input.)
If AUTO INPUT selector remains at "TAPE/AUX" even though TAPE/AUX finishes its playback, set to this position "H" to select "CABLE."

TAPE/AUX MODE switch

This switch is used to select audio modes (MONO/STEREO) of components connected to the TAPE/AUX input terminals.
Connect a component with monophonic audio output either to "L" or "R" AUDIO INPUT jack and set this switch to "MONO".

⑭ CABLE VOLUME control

Controls the volume of the CABLE input terminals sound.
Thus control is normally centered but should be adjusted in accordance with the volume of the LASERDISC.

⑮ CABLE MODE switch

Changes the audio mode (MONO/STEREO) of cable broadcasts.
For mono cable broadcasts, connect to either the "L" or "R" channel and set the CABLE MODE switch to MONO.

⑯ AUDIO INPUT jacks

■ LASERDISC
Connect to the AUDIO jacks of a LD player.

■ VCR
Connect to the AUDIO OUT jacks of a VCR.

■ CABLE
For input of monophonic audio signals from cable receivers etc.
When both terminals are connected select 1 or 2 using the sending device.

■ TAPE/AUX
Can be connected to the PLAY (OUTPUT) jacks of a cassette deck or to the OUTPUT jacks of other audio components.

⑰ TAPE REC jacks

Connect to the REC (INPUT) jacks of a cassette deck. Mic mixing recording will be possible, because signals processed with microphone mixing are output.
Sound of TAPE/AUX or CABLE will not be output when the TAPE REC button is OFF.

⑱ ADAPTOR IN/OUT jacks

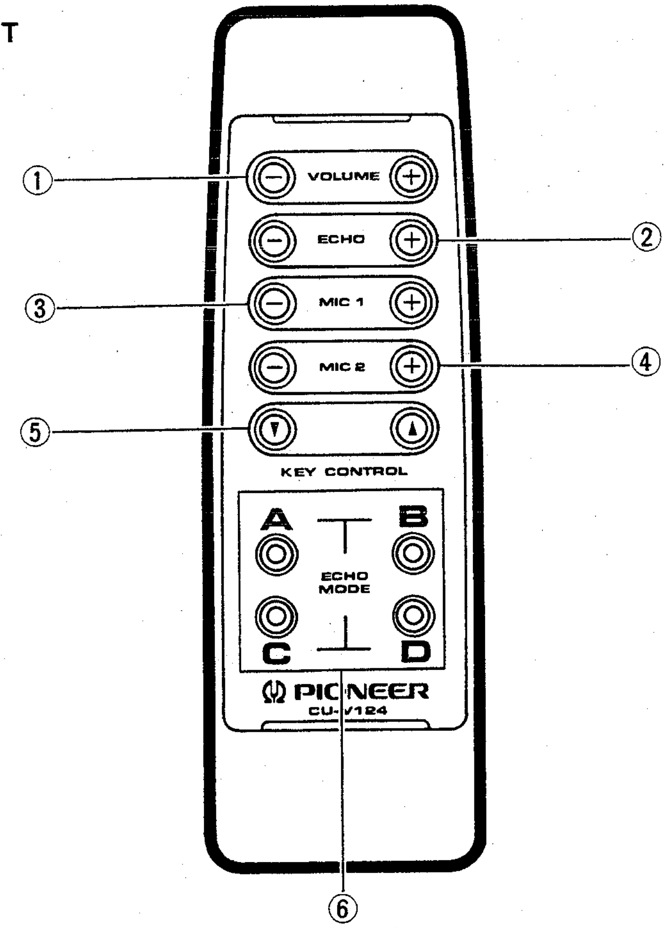
Used to connect a graphic equalizer or a sound processor. The ADAPTOR IN/OUT jacks have a jumper plug. Install the jumper plugs when you do not use these jacks. Otherwise, there will be no sound output.

⑲ GND (Ground) terminal

Always ground this unit to prevent electrical shock and to avoid generating interference or noise in other equipment.

⑳ Power cord

REMOTE CONTROL UNIT



① VOLUME (−, +) button

Adjusts the sound volume of the entire system.

② ECHO (−, +) button

Can simultaneously adjust the echo volume for MICs 1, 2 and 3.

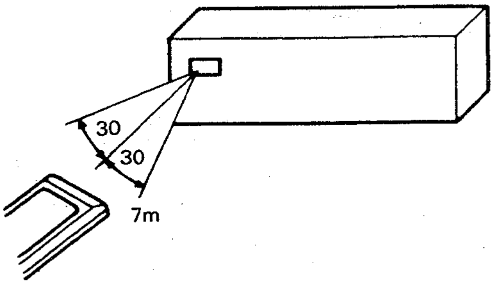
③ MIC 1 volume adjustment (−, +) button

Adjusts the sound volume of MIC 1.

④ MIC 2 volume adjustment (−, +) button

Adjusts the sound volume of MIC 2.

The supplied remote control unit allows you to control the amplifier from a remote location. Point the remote control unit at the amplifier's sensor. The remote control unit can be used within a distance of 7 m and at up to an angle of 30 degrees.



⑤ KEY CONTROL (▼, ▲) button

▼ : Changes to a lower key.
▲ : Changes to a higher key.

⑥ D.S.P. ECHO MODE button

Allows choice of your favorite echo effect from A, B, C or D.

- The remote control unit might not operate properly when an obstacle exists between the sensor and the remote control unit. Also, the remote control unit might not work if it is pointed from an improper angle.
- Remote control operation might not work if the remote control sensor is directly hit by strong fluorescent light. In such a case, place the fluorescent lamp away from the amplifier.
- If the remote control unit is used near a device emitting infrared rays, or another remote control unit using infrared rays is operated nearby, improper operation might occur. Also, a device using infrared rays might operate improperly if the remote control unit is used near the device.
- Replace the batteries if the available operation range of the remote control unit becomes very small.
- To prevent leakage, remove the batteries if you do not use the remote control unit for a long period (more than 1 month).

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